Student Medicine

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The Journal of the American College Health Association

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Student Medicine

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General Information

STUDENT MEDICINE, the official journal of the American College Health Association, was established to provide a medium for the exchange of information relating to the practice of medicine in college and university health services. It welcomes the opportunity to publish articles pertinent to this area of medical practice.

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Dr. Ralph W. Alexander
Gannett Medical Clinic
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Editorial Comment

PREVENTIVE MENTAL HEALTH

THE strength of our society is based largely on the family. If the family is disrupted society tends to deteriorate. Such deterioration is evidenced by phenomena such as juvenile delinquency, rising rates of illegitimacy, and a general lowering of moral standards. These conditions seem more prevalent and pervasive today in the United States than ever before. This strongly suggests that in our present-day society the family unit is failing to fulfill all of its desired functions.

It is oversimplification to state that all evils in our society can be blamed on a breakdown of the family, but there is considerable evidence which relates conditions in a society to the nature of the family units in that society. To cite one example, it is well known that Chinese family structure is strong, with respect and obedience accorded to the parents by the children. It is recognized also that Chinese youth are almost never involved in juvenile delinquency.

As we examine the cause for this failure of the family, two seemingly opposing factors stand out, (1) the poverty of segments of our society and (2) the affluence of our society. At all levels of the socioeconomic scale forces are at work that disrupt the family and interfere with the development of strong personality and character traits in the children. All family members are affected, for if one part of its structure fails the rest is weakened.

In this country ever mounting inflation and the constant quest for a higher standard of living work especially against those in the lower income group, but many in the higher income group do not escape unscathed as they seek to "keep up with the Joneses."

In the low-income family both parents often seek gainful employment in order to provide the bare necessities of decent living

because the rising cost of living makes one income inadequate, especially if there are several children. Thus the family is truly motherless for one-third of the time, and even during the rest of the day the mother, harassed by lack of time and fatigue, may serve more as a housekeeper than as a true mother and wife. Family structure is weakened.

The well-to-do family is often in a similar situation for somewhat different reasons. Here the mother spends her time and energy in seeking a career, in social activity, in church or welfare work, often helping the "underprivileged," never realizing that in so doing her own children join the ranks of another type of the underprivileged. The increasing divorce rate adds many broken homes to the total, so that the number of families subjected to disruptive forces is considerable.

How can we attack this problem? Preventive measures would appear to offer more hope than corrective ones. Here is a tremendous challenge for preventive mental health, one that at the present time is not being met, for as Farnsworth notes in his paper, "Into the Next Century in College Health Services," which appears in this issue (pages 167–177), "Health education and instruction in marriage and family living have a very low priority; in fact, there has been almost a multiple conspiracy of denial that instruction in such matters has any relevance to higher education. In some way we must correct the idea that, because a boy and a girl are able to produce a baby, they know how to be good parents."

If we, in our colleges and universities, can inculcate in students an understanding of proper family structure, its role in the development of personality and character in their children, and suggest ways of achieving a strong family unit, then perhaps there will be hope that in the next generation there will be fewer broken and weakened families.

Our greatest opportunity lies in prevention for the next generation rather than in carrying out corrective measures in the present generation. This would seem to offer a great challenge for a combined effort by health education and mental health personnel and the ACHA should be the leader in these areas.

The Need for Recommended Practices and Standards for College Health Services*

GORDON G. BERGY, M.D.,
UNIVERSITY OF WASHINGTON

PRACTICES and standards have long been an issue at the University of Washington. University administrative authorities who establish policy and allocate funds have never felt that the University could directly provide an optimum program of medical care for students through either the Student Health Service or the teaching hospital. The practical considerations of budget and sociopolitical pressures have always prevented the asking of the question, "What can be done to provide the finest care?" Instead the question has always been, "What is the best that we can do under the circumstances?" Then secondary questions have been asked along these lines: What do they do at other schools? What are the recommended minimum standards for schools of our size and mission? What are we legally required to provide?

Often when we recommend a change in policy or a new program we are asked to justify it by obtaining data on what other schools do in this situation. On other occasions we are asked what professional groups think about it, and, particularly, we are asked the attitude or recommendations of the American College Health Association. Thus it is for the answering of many of these questions that we need a set of written standards to which we can refer.

* Presented before the General Session, American College Health Association, Thirty-ninth Annual Meeting, Detroit, April 26, 1961.

During the past year further impetus to this need has been provided from an entirely different source. This source was the Washington State Department of Health. The Director, Dr. Bucove, was engaged in a periodic review of the licensing and regulating standards for medical care facilities and was concerned about the quality of the health programs at our colleges. He appointed an *ad hoc* committee to review in detail the standards for "specialized medical facilities." This group was asked to review the standards for nursing homes, private psychiatric hospitals, boarding homes for the aged, and the like, and especially to write sets of standards for the two types of institutions still unregulated. These two were college health services and rehabilitation centers. (General hospitals are regulated, but review of their standards was not assigned to this particular group.) In Washington any medical facility which retains persons as bed patients for overnight care is by law subject to State Health Department regulations. Medical facilities which are purely clinics and which never retain bed patients are not subject to regulation except for licensing of the physicians, nurses, and practical nurses who are staff members. Therefore, it became clear that we were obligated to set regulatory standards for any college health service which operated an infirmary or hospital unit. It has not yet been decided whether regulation is mandatory for those health services which operate only out-patient clinics.

The general areas to be covered involve: physical plant, equipment, food service, sanitation, medical records, handling of drugs and narcotics, and personnel. Later I shall try to outline some of our recommendations. Currently the committee is withholding the final action pending an opportunity to review and incorporate the regulations and standards promulgated at this meeting of this association. We are also awaiting clarification of the legal requirements in regard to outpatient clinic health services. I am hopeful that this group may see fit to include most or all of the subjects above in its deliberations and recommendations, in addition to the eleven subjects already listed by the committee.

We have often been asked our attitude toward such regulation, either voluntary or legally enforced by the State. I have always replied that I favor it and would welcome it if it is clear and com-

plete and if college health personnel are permitted a major voice in designing it. Some have felt that this would be an additional unwelcome mass of red tape which would only annoy us and obstruct our work. Surely it could turn out this way, and we must not let it have this effect. In Washington similar regulations have had a salutary effect upon nursing homes. Patients, physicians, and all enlightened nursing home operators have been very pleased with the improvement in physical facilities and medical care that such regulation has brought about. In short, their entire reputation and public image have been reversed by it. Similar regulation can have just as salutary an effect for all but a few of the most elegantly financed college health services. I think it is safe to say that most of us have suffered from a prolonged "recession," with detrimental effects on personnel and facilities. Standards and regulations can help us get what we need. If we can point to a written set of standards by a national organization and show our college presidents that we are "below standard" in space, equipment, or staff, we shall be much more likely to obtain the budgetary help we need than if our request for an improvement is based only on our own judgment. Or, in our own state, if we point to Health Department regulations, which have the force of law, and say that we are not meeting standards, then the administration would have little choice but to grant requests which would remedy the deficiency.

Standards may be useful to us in other ways, particularly in guarding against inappropriate requests or expectations by administrators. They may protect a nurse against the request that she practice medicine or pharmacy in an effort to save the college or the student the necessary cost or effort of providing the proper sort of personnel. They can protect a physician or nurse from being asked to do a job without necessary facilities or equipment or from being forced to divulge confidential medical information.

Several physicians have asked me whether high standards might raise the cost of providing care, thus making it difficult or impossible for some services to operate. The answer is "Yes." We all know that good medical care costs money. Some of us would have to spend more money (and should have more to spend).

A college administration which has decided to become a purveyor of medical care must be assumed to have made itself aware of the costs and problems. With the decision to offer medical care, responsibility descends upon the college administration. Families and students expect, and rightly so, that attention will be given to quality and breadth of service provided. Too often the college administrator has wanted to be able to say to parents or to write in his catalogue that the school offers health care, and then has proceeded to starve the health service for personnel and equipment so that the promise perforce was partly empty. No one has been quicker to recognize this than students. In their disappointment at service limited in quantity or quality they become angry and distrusting of us and deprecatory of our efforts. I am afraid that we will have to go on "taking this rap," unless we can achieve standards and regulations which will help us get support for our programs. It may be that an occasional small school will be frightened out of initiating a health program because of the cost of setting up the program to meet good standards. If so, I would feel that we were probably better off without such a program. A program characterized by inadequate quarters, by a small staff performing rushed interviews and examinations, by inadequate consultation, and by insufficient laboratory and x-ray procedures for clarification of diagnosis leaves the student with a bad taste, the school with a black eye, and the medical profession with more detractors.

Some of the questions that face us in setting regulations and standards are:

1. Can we write a single set of standards which will apply to all schools, regardless of size and regardless of whether they are primarily resident schools or commuter schools?

2. Can there be a numerical scale, based on size of student body, for amount of equipment, size of staff, and so on? Or should we think in terms of entirely different sets of precepts for "small" schools and larger universities.

3. How detailed should we make our recommendations? General concepts and philosophical statements are easier to write, and they do not step on any toes. They would not be as useful, however, in solving our problems.

Provisional Standards for College Health Services, State of Washington

OUTPATIENT CLINICS

1. *Requirements for Staffing*

Physicians: One per 2,000 students (a part-time physician for schools with smaller enrollments) with half-time positions to be allotted at 3,000, 5,000, etc. Schools with enrollments of 5,000 or more students shall provide consultation services in the specialties of surgery and psychiatry.

Nurses: The minimum requirement is one, plus one additional nurse per each two full-time physicians.

Technicians (laboratory and x-ray personnel included): There will be a minimum of one full-time technician, with additional technical personnel to be employed at the ratio of one for each 3,500 students, over and above the first such 3,500.

Clerical: One secretary shall be employed for the first 1,500 students or a fraction thereof, and then one additional secretary or clerk shall be employed for each additional 2,500 students.

Part-Time assistants: Specific numbers and types of personnel for such work will not be assigned, but funds shall be available at the rate of 75c per year per full-time student for the employment of additional personnel in any of the above categories at times of peak loads.

2. *Equipment*

For each physician on duty at any one time there should be a minimum of one consultation room of 90 square feet and one examination and treatment room of at least 80 square feet. The examination room should contain a regular adjustable examining table of metal construction with leather or plastic cushioned top, a spot light or portable surgical lamp, a Mayo stand or similar movable stand for instruments and equipment, and one instrument cabinet, treatment cabinet or "specialist cabinet" for storage of medications and instruments. Each office must also contain a blood pressure cuff and an otoscope-ophthalmoscope set. For each two physicians there should be at least one "treatment" room in addition to the usual consultation and examining rooms. A minor surgery room, of at least 120 square feet, shall be provided. This room shall not be used for routine examinations or for incisions and drainage of abscesses, but will be reserved entirely for "clean" surgery.

Each student health service should contain the following items: eye

charts for distant or near vision, testing device for color vision, wheel chair, autoclave, microscope, centrifuge, and refrigerator. Schools with total enrollment over 5,000, or operating infirmaries of 12 beds or greater capacity, must also have an electrocardiograph and x-ray diagnostic equipment.

3. *Small College Health Service Organization*

In small colleges, a nurse may operate the clinic, treating patients without the immediate presence of a physician. She may carry out first aid in the case of injury, treat minor illnesses, and give advice as to the type of care needed by a student (particularly regarding whether the problem is one which must be evaluated by a physician). Treatments shall be of types routinely included in the practice of nursing. The nurse may not use or administer prescription drugs in treatment unless ordered by a physician. The nurse's duties may include routine immunizations and health education.

Treatment beyond that noted above must be performed by physicians. It is recommended that a doctor be present for a part of each class day if the college has resident students. A physician must be available for emergency calls at all times that school is in session or dormitory occupancy permitted.

Medical director: In all cases the school will arrange for the appointment (and remuneration) of a physician to act as medical director or consultant. This physician shall supervise practices in the Student Health Service, shall promulgate detailed written standing orders, and he or a designate shall be available for emergency calls and clinic duties. The medical director appointment is for the express purposes of insuring that one individual will plan and supervise continuity of the operation, and insure that the nurse will have a specific individual whom she can consult on matters of policy or care that do not come within the purview of other regular doctor-patient relationships.

4. *Dispensing of Drugs*

The filling of prescriptions shall be carried out only by a pharmacist. The dispensing by nurses of multiple doses of drugs or medications in containers for later use is expressly forbidden. Physicians may dispense amounts of medications sufficient to allow the patient to start and continue treatment for 2–3 days, in the manner currently permitted for "house calls." However, physicians may not engage in the regular packaging and dispensing of larger quantities of drugs.

INPATIENT CARE

It is assumed that each inpatient unit will be associated with a clinic staffed and equipped as noted above, and that the same medical personnel and laboratory organization will support the hospital.

1. *Bed Allotment*

Minimum number of beds available shall be four per 1,000 students living away from home, plus one additional bed per 1,000 other students. There shall be no more than four beds in any one ward, and one-half the total number of beds must be in single or double rooms which may be set up for isolation of contagious disease. Adjustable hospital-type beds will be provided, and for each patient there must be a separate chair and bedside table.

2. *Care by Physician*

Each patient admitted must be examined by a physician at the earliest possible time, and in no cases longer than 12 hours after admission. Medications and treatments provided will be only those ordered by the physician. Discharge of patients will be only at the physician's order.

A physician must make daily examinations of all in-patients. In more serious cases more frequent visits may be required, and such service must be available if care is offered these patients.

3. *Nursing Care*

A registered nurse shall be on duty at all times. The minimum number of nurses for *inpatient sections* will be three full time, plus their weekend, holiday and vacation reliefs. Two additional full-time nurses shall be employed for each increment of ten beds above the basic facility of 20 beds. Additional personnel for the performance of nursing duties may be either registered nurses or licensed practical nurses, depending upon the judgment of the physician in charge and of the chief nurse.

4. *Food Service*

It is preferable that separate food-preparation facilities be operated within the student health service building, but this is not a requirement. However, any facility that is used must include preparation of soft diets, liquid diets, and bland diets, as well as the regular full menu. In addition, liquid nourishment must be available on the hospital ward. This should include such items as milk, fruit juices, and soup.

5. *Laboratory*

Any facility offering inpatient care must provide for the performance of routine laboratory studies including white blood counts, differential counts, urinalysis, and hemoglobin, hematocrit, and sedimentation rate determinations. Heterophil tests for infectious mononucleosis must be available. At least the following blood chemistries must be performed in the laboratory: blood sugar, bilirubin, thymol turbidity, or cephalin flocculation. For bacteriology, facilities for Gram stains and for identification by culture of beta hemolytic streptococci and staphylococci must be provided. X-ray facilities are desirable in any hospital unit but are required of units of 12-bed or greater capacity. Such x-ray equipment shall be modern and well maintained, and shall be operated by a trained x-ray technician.

6. *Records*

A chart shall be constructed for each inpatient , including separate pages for nurses' notes, physicians' orders, and physicians' notes. All medications shall be recorded in writing, and all physicians' orders for such medications shall also be written. History, physical examination, and diagnosis shall be recorded by the physician for each patient.

Into the Next Century in College Health Services*

DANA L. FARNSWORTH, M.D.,
HARVARD UNIVERSITY

EVERYONE active in the affairs of the American College Health Association during the past few decades is aware that its activities have been growing increasingly more widespread and effective. This past year has witnessed more progress than in any other similar period. I believe this progress is solid, well directed, and indicative of even more effective changes in the next few years.

Setting policies in a national organization is one thing: getting them carried out in hundreds of institutions each of which has different needs, problems, and potentialities is quite another. We see encouraging evidence that college and university administrators are taking the health needs of their students seriously in the new health centers being constructed. During the past few years the universities of Nebraska, Colorado, and Delaware; Mt. Holyoke College and Connecticut College for Women; and Northwestern, Rutgers, and Tulane universities have all built new health centers. In addition, major new additions to health facilities have been constructed at Cornell and Michigan State Universities and at the University of California in several of its branches. In one more year the universities of Illinois and Massachusetts and Harvard University will open new and modern centers. Several other institutions are actively projecting new structures and programs.

I am quite certain that no one can predict what will be happen-

* Presented before the General Session, American College Health Association, Thirty-ninth Annual Meeting, Detroit, April 29, 1961.

ing in the world when the ACHA meets in 2061. There are a few things, however, that one can say with a certain degree of certainty. However rapid social changes may be, and whatever new stresses will emerge, man will remain much as he is now so far as his potential capacities are concerned. Because of our growing interdependence on one another and the need to become accustomed to the "cramped intimacy" that is made necessary by our growing population, we will have more and more regulatory devices to prevent us from destroying one another. It is very much hoped that these forms of regulation will be those of self-control rather than of outer manipulation by authoritarian figures. We are now experiencing turmoil in many different parts of the world as persons attempt to use authority for its own sake and without having the wisdom to do it. Whitehead has defined wisdom as "common sense on a large canvas," a remarkably rare commodity.

As the population continues to increase—and it will, barring such developments as the cataclysmic disorders of nuclear war, starvation, or new and unforeseen epidemic diseases—we will find it necessary to devise methods of achieving better communication between those in authority and those who are affected by it. It will be necessary to find some way of controlling the number of our people. Enough human beings are being added to the world each month to populate a city the size of Chicago. Effective birth control seems to be an elusive goal: cultural, religious, and various other obstacles intervene.

We in student health will find it necessary to pay increasing attention to problems outside the narrow borders of our own institution. If these life-taking disasters or social changes do not occur, there must be more and more social planning to enable us to survive. Kindness will become obligatory. Thomas Browne said in the seventeenth century that "it is in the power of every hand to destroy us and we are beholden to everyone we meet he doth not kill us." We are now dependent for our lives on a very few people in high places and upon their mental stability. These people will be more stable than otherwise if they are supported by a large number of persons with integrity. We must learn how to channel aggression into constructive outlets. Health planning will have to be on a much greater scale than ever before. The problems of our

people working abroad, those who will be serving in the Peace Corps for example, should be examined by all of us with great care. We will need better health facilities than we now have in all parts of the world. I predict that the concept of mental health will be lost fairly soon, probably within the next two or three decades, and emerge into a more inclusive concept involving minimizing the causes of diseases at or before their points of origin.

Rene Dubos has described the changing character of the "filth diseases." Up until about a half century ago these were predominantly the intestinal disorders, resulting from the filth in our streets, gutters, and streams. This has now largely been replaced by pollution of the air by gases, smoke, and other irritants, causing respiratory diseases to become increasingly troublesome. These disorders can be controlled only by removing air pollution, which means vast changes in our social attitudes. "Each civilization has its own kind of pestilence and can control it only by reforming itself." [1]

From these and similar observations it is perfectly safe to predict that those who deal with environmental health and safety will have a very important role to play during the next few decades. Not only will air pollution and the effects of various toxic materials used in industry be a constant problem, but we will be faced with learning how to use more and more radioactive substances safely.

As we get certain of our diseases of youth and middle age under control, more viruses will come into notice; new bacteria and fungi of pathogenic significance will appear. We will always have the process of disappearance and reappearance of diseases with which to contend, especially since we are more internationally minded now than we were twenty years ago. Tuberculosis and malaria and parasitic diseases of all kinds will be more common as our people go to Africa, Asia, and Latin America and come back and people from those countries come here to study. The specialists in environmental health and safety will have to learn how to collaborate effectively with internists and psychiatrists even more than at present. Prevention of accidents is going to become more and more a problem as we become increasingly dependent upon

[1] R. Dubois, *The Mirage of Health* (New York: Harper, 1959), p. 164.

technological gadgets, the practical applications of our scientific developments. In the prevention of accidents we will find that the specialists in environmental health and safety will work more closely with the psychiatrists, the big problem in accident control being self-control.

The recent report of the Joint Commission on Mental Illness and Health is the result of the most comprehensive survey of the emotional aspects of health that has ever been attempted in this country. If the recommendations and findings of this report are taken seriously by our people, great progress in the management of mental illness and the promotion of mental health can be expected in the next few decades. Of particular interest to those of us working in colleges and universities is the emphasis on primary prevention—the improvement of those conditions in society which foster the development of strong personalities and character. The prevention of urban decay, the removal of unfair discrimination, the minimizing of religious intolerance, and the countering of the corroding effects of excessive and misguided nationalism are prime goals, and they are intimately concerned with health. Substandard housing, poor schools, and malnutrition will be focuses of our keen interest. Any conditions in our communities which produce large numbers of young people who feel rejected, isolated, or angry, or otherwise embittered should be constantly studied by us, and we should be active in all community projects aimed at their improvement or elimination. Physicians and nurses are not as skillful in dealing with these broad social issues as are some of our colleagues in other health professions and in the behavioral sciences. Our techniques of dealing with one person who is injured or who is suffering from disease should be matched in quality by our understanding and skill in minimizing harmful influences in the larger social system.

Recent progress in research on relations between faculty members and students suggests that teaching of proper values will not occur unless faculty members are good role models for their younger colleagues to emulate.

Health education and instruction in marriage and family living have a very low priority; in fact, there has been almost a multiple conspiracy of denial that instruction in such matters has any

relevance to higher education. In some way we must correct the idea that because a boy and a girl are able to produce a baby, they know how to be good parents. Those influences now working in our society which weaken the family are the very same ones which are slowly eroding a sense of meaning and purpose in the lives of our people. The worth and dignity of the individual have never been so threatened. In a sense we are now living in a time when the normal, decent, well-behaved individual counts for less and less and the abnormal, indecent person who is always irritating others counts for more and more.

How health services can be brought to our people effectively and without excessive financial strain is not only a private concern but is of major political significance. Medical statesmanship of a high order will be necessary if we are to avoid governmental control of medical practice. College health physicians are in a position of strong potential leadership in developing plans for furnishing good medical care, including primary and secondary prevention of disease and injury, to all the people connected with their institutions. If educational institutions, industries, and the smaller governmental units work together in devising health plans peculiarly suited to meet their own needs, centralized federal control may be avoided. College health services might well serve as models for other communities to emulate.

I would like to see the entire country served by a series of health-promoting institutions of three different levels of complexity, supplemented by the services of private practitioners of medicine. Many physicians would divide their efforts between group practice and private practice; some would confine themselves to one or the other.

The most numerous of the three types of institutions would be the health centers, each one devoted to raising the standards of health education, sanitary services, immunization programs, safety practices, and any other activity that would permit living with a minimum of pain and disability. Public health officials would have their headquarters in these centers, well-baby clinics would be conducted there, and laboratory services would be available for aiding in the control of communicable disorders. Health exhibits and lectures and discussions on timely subjects would be held

when appropriate. For the most part, the functions performed in such centers would be those not readily accomplished by a fee-for-service method of support.

Another series of institutions supporting the health centers would be the community hospitals. These would be designed to care for illnesses and injuries of mild to moderate severity. Here patients would have their straightforward, uncomplicated operations, such as removal of diseased appendixes, repair of hernias, and treatment of injuries. Illnesses whose nature and limits were well known would be treated in these hospitals.

A final series of institutions serving as supports to all the other health facilities would be the major diagnostic and treatment centers, located for the most part in the larger urban centers. These hospitals, mainly associated with medical schools, would specialize in the diagnosis and management of the relatively small number of patients who have obscure illnesses or conditions which require elaborate treatment methods and extensive laboratory work. Large-scale research programs designed to further medical progress as rapidly as possible would also be a major function. There should be at least one of these centers in every state and several in the more popular areas. Patients who went to these major centers would know that their expenses would be quite high—possibly $50 to $100 or more daily—but they would also know they would ordinarily not stay very long, and they would have ample opportunity to arrange for payment before they became ill.

These major centers are absolutely necessary for the welfare of all of us, as well as for advances in our knowledge. They face bankruptcy unless we devise methods for their proper use and support. Our country is not wealthy enough to have all the facilities needed for all kinds of treatment in all hospitals. If we could organize a system of medical care of this kind, the colleges and universities could actively participate. Those who have less than 2,000 to 3,000 students could develop their health centers in conjunction with the communities in which they are located and still not get lost in the process. They could use the same laboratories, x-ray facilities, and other diagnostic equipment but have separate sections for their infirmaries and separate offices for the outpatient care of their students. This would enable the communities to help

the colleges and the colleges to help the communities. The larger universities, particularly those with an enrollment of more than 5,000, could have their own separate health centers. We already have them at larger institutions such as Minnesota, Michigan, Michigan State, Yale, Harvard and other similar universities. We are, of course, dependent upon the larger diagnostic and research centers for serious operations or obscure diagnostic problems. The university health centers, like the community hospitals, would be "feeders" for the big diagnostic and treatment centers.

Obviously there would be considerable overlap between health centers, community hospitals, and major diagnostic and treatment centers. Rarely, however, would one institution try to perform all three types of functions.

I believe the institutional members of the ACHA could be leaders in the development of voluntary plans, such as the one envisaged above, which could be models for other units throughout the United States. If at the same time we could devise satisfactory prepayment plans, we might then look forward with some success to averting a system of governmental control of medicine, such as is in operation in many other countries. I believe the American Medical Association might well call upon the American College Health Association to aid in restoring the medical profession to a position of leadership in bringing optimum health care to all our people. Whether rightly or wrongly, organized medicine appears to many people to be fighting a rear-guard action against progressive development. This is unfortunate for physicians, other members of the health profession, and the general public.

It is somewhat impractical to try to develop health plans in accordance with what people want. Their sophistication is not always of a sufficiently high level to enable them to know what is best for them. We should try to promote health in every way possible, but the emphasis should be on what people should want if they were informed rather than what they may want when they are not informed. This may seem at first to be antidemocratic, and perhaps it is to some extent. A pure democracy would probably be self-defeating in any case, and yet we should strive for the application of democratic principles in decision making by people who exert leadership and who are well informed; we will have to assume that

these persons will act responsibly for the greatest good of all the people.

A very important part of our job in college health is to develop better motivation for health among our students, knowing that they will shortly be community leaders in their own neighborhoods. They are the people who will have prestige and whose opinions will be influential. We have a particularly advantageous spot from which to work. There are nearly four million college students at the present time, and what they think of us will be translated in some degree to the attitudes they develop concerning health facilities in their future home communities.

We will be missing a great opportunity if we cannot unite our colleagues in all branches of medicine in the common goal of developing the highest possible standards of health care. At the same time we should further the idea that the time to pay for illness is when people have incomes and when they are working, rather than assuming that they will be able to pay huge medical bills when they are disabled and threatened with loss of jobs. Formerly, it was considered a mark of good judgment and foresight to save money for medical emergencies. Under present conditions this is impractical or even impossible for many people. Foresight at present consists of buying the kind of insurance which will protect one against catastrophe.

Many of our efforts in attempting to develop motivation for health among our students are mitigated by the "cult of anti-health" among our faculty members. In many quarters professors are proud of the fact that they have not consulted a physician for many years, and many seem to think that persons with serious handicaps are able to work more effectively than those who are healthy. The myth of invincibility flourishes in faculty members as it does among businessmen. If we could understand our faculty members a bit better and work with them more closely and include them in our health plans in cooperation with our colleagues in private practice, I believe we might gradually develop improved attitudes about the promotion of health.

I think it would be advantageous during the next few decades if we moved more and more in the direction of complete medical

care for students, faculty, employees, and their dependents. This we need not do abruptly, nor should we work without prolonged and frequent consultation with all of our colleagues in private practice. It is not a question of taking practice away from one group of physicians and giving it to another, but rather a gradual change in the method of payment—recognition that as social changes occur in our society, medical care and methods of paying for it should change correspondingly.

A major avenue for improvement in the ACHA during the next few years is an elevation of our own standards as members of the health professions. I believe that our group is an improvement over the one which met under ACHA auspices twenty years ago. I will be very disappointed if those who meet in 1981 do not look upon us as being somewhat backward and with a rather narrow vision. Our success should come from seeing our younger colleagues do better than we have been able to do. If we allow ourselves to become chauvinistic, and unwilling to participate actively in the intellectual life of our own institutions, we will not get the kind of recognition that we should have if we are to make health promotion intellectually respectable.

College physicians, like all others, will have difficulty in keeping up with progress in the medical sciences. Yet further and more intense specialization is not the answer. Each of us should be a specialist to some degree, but, more importantly, we should be continually concerned with being a "generalist"—a person who attempts to integrate the outstanding advances of medicine into total life experience. No group has a more advantageous platform from which to view man than we have. We must be students of society as well as of man individually.

Our multiplying problems could be increased opportunities if only we knew how to mobilize the enormous amount of good will everywhere about us. Even a cursory reading of social histories of a century ago convinces one that anxiety and peril were more pervasive then than now.

But why our preoccupation with material advancement at the expense of those services which should improve the quality of our lives? I have often wondered why so many people were angered

by Galbraith's book *The Affluent Society*, in which he proposes that the quality of living should take precedence over the accumulation of material things which we could equally well do without. The apathy, inertia, conservatism, and plain selfishness that prevent favorable social progress work equally strongly against the elevation of college health standards.

We have seen in this conference how faculty members, presumably distinguished in their own disciplines, seem proud of the neglect of their own health. Students similarly take little interest in their own health until they encounter pain, anxiety, or threats to their physical integrity. Robert Frost's comment, "Something there is that doesn't like a wall," reminds us that we have a tremendous task in overcoming inertia about health and motivating our people for effective health promotion. That this is not a new problem is proven by a statement made by Professor Hitchcock of Amherst College in the spring term of 1830:

> There can be no doubt, that we are to impute the alarming prevalence of nervous complaints, in a great measure to the ignorance that has so extensively prevailed among students, in the early stages of their education, as to their causes, remedies and means of prevention. This has been a part of education, which it has been the custom to neglect, and thus to leave the health of the young, the very foundation of all their hopes, to take care of itself. We have yet scarcely got rid of the belief, not long since so prevalent, that nervous ailments are the creatures of imagination, and that it is ever unsafe to study into their nature, lest we should catch the mysterious contagion from the mere description. Just as if knowledge, which on every other subject is the pole star of human conduct, should in this case, prove a mere *ignis fatuus* to bewilder and blind, while ignorance would be security and bliss. But though such absurdities are vanishing, still the means are not yet put into the hands of the student for guarding himself against the insidious approaches of ill health.[2]

Great as has been the advancement in student health in its first century, it should be dwarfed by progress in the next few decades. The only obstacles in our way are the overwhelming problems of how to manage ourselves. If our people can be awakened to the fact that research in human development and how to get along

[2] E. Hitchcock, *Dyspepsy Forestalled and Resisted; or Lectures on Diet, Regimen and Employment* (Amherst, Mass.: J. S. & C. Adams, 1831), p. 15.

with one another must assume priority over getting to the moon and the other planets, we shall be in for one of our finest periods. Man's old enemies of poverty, starvation, and epidemics are being superseded by hatred, rivalry, greed, and noisy boredom. It will take more than medical skill and statesmanship to lead us through these hazards, but college health workers can at least be among the leaders in their amelioration.

University and College Leadership in School Health Education

RICHARD K. MEANS, ED.D., TEMPLE UNIVERSITY

IT has been said that those things which happen in a profession, good, bad, or indifferent, relate back to its leadership. In school health education the importance of capable leadership cannot be overemphasized, for the effective development and progress of programs in the field has been proven to be vitally dependent upon this factor.

The university and college as a promotional and supporting agency for school health education undertakes both a supplementary and in some ways a unique role among other contributing forces. Certain of the leadership responsibilities relegated to or assumed by institutions of higher education in the development of such programs are presented within three major headings in the next several pages. An attempt has been made to trace significant developments, illustrate present status and determine broad needs in each of the functions indicated.

PROFESSIONAL PREPARATION

Professional preparation has been described as the core of any professional field. To the college and university falls the major responsibility for this task. In the final analysis, what is accomplished in this phase has vital significance in what will be fulfilled in health education at all levels.

Professional preparation in health education involves those provisions intended to prepare the classroom teacher, health coordinator, and other active or prospective personnel to better fulfill their health responsibilities in their respective roles. In addition, it includes those in-service experiences offered while on the job.

Education of School Health Personnel

Undergraduate and graduate preparation in school health education exists in approximately fifty fully accredited colleges and universities throughout the country.[1] From these institutions come the qualified health educators to serve the schools.

Attempts to improve professional preparation of school health personnel have centered around seven national conferences devoted to discussion, policy making, and the establishment of educational standards. These began with the first in May 1948 at Jackson's Mill, Weston, West Virginia, with concentration on the undergraduate program.[2] Other gatherings included two U.S. Office of Education Conferences in 1949 [3] and 1953;[4] the Pere Marquette, Illinois Conference in 1950;[5] the American Association for Health, Physical Education and Recreation Conference in 1955;[6] and the two-in-one Conference on College Health Education in 1956.[7] Leadership in each instance was given by colleges and universities.

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[1] E. B. Johns, Professional Unity in Health Education, *JOHPER, 30:* 33, 1959.

[2] *The National Conference on Undergraduate Professional Preparation in Health Education, Physical Education and Recreation,* (Chicago: Athletic Institute, 1948).

[3] Federal Security Agency, *Conference on the Undergraduate Professional Preparation of Students Majoring in Health Education* (Washington: U.S. Office of Education, 1949).

[4] U.S. Department of Health, Education, and Welfare, *Second Conference on Professional Preparation of Students Majoring in Health Education* (Washington: Office of Education, 1953).

[5] *Graduate Study in Health Education, Physical Education, and Recreation* (Report of the National Conference on Graduate Study in Health Education, Physical Education, and Recreation, Pere Marquette State Park, Ill.) (Chicago: Athletic Institute, 1950).

[6] *Health Education Conference Report* (Report of the National Conference on the Undergraduate Health Education Minor Program and Desirable Health Education Emphasis for the Physical Education Major Program) (Washington: American Association for Health, Physical Education and Recreation, 1955).

[7] *A Forward Look in College Health Education* (Report of the National Conference on College Health Education) (Washington: American Association for Health, Physical Education and Recreation, 1956); *Health Education for Prospective Teachers* (Report of the National Conference on College Health Education) (Washington: American Association for Health, Physical Education and Recreation, 1956).

The American Association for Health, Physical Education and Recreation, recognizing the importance of professional preparation in the three fields, devoted almost a complete issue of its journal to the subject in September 1959. Considerable space was given health education specifically.

In-Service Education

Despite the notable developments in teacher education and the excellent preparation afforded by certain institutions in health education, there is and always will be vital need for in-service health education. Among the reasons for this are the lapse of time between preparation and actual school experience and the resulting loss of knowledge, the specific problems requiring solution which arise on the job, and the rapid changes and progress in the field which demand keeping up to date.

Because of these and other factors a variety of procedures have evolved to help satisfy this need for school health personnel. Since the conception of the modern idea some two decades ago, the health education workshop [8] has contributed immensely to in-service health education. Serving either as originators of the workshop or consultants, college and university health educators have had a profound leadership function in such gatherings by helping to plan, to solve problems of, and to give special aid to school health education programs.

Other college and university in-service education leadership activities include the preparation of printed health materials for distribution to schools; participation in institutes, clinics and conferences; and the provision of resource functions and consultant services. Pennsylvania State University has recently developed an extensive "contact" program with their graduates in health, physical education and recreation. Utilizing an alumni newspaper, designed not only to disseminate information but also to gather it, and using graduate questionnaires, personal visitations and clinics, among other procedures, program weaknesses are discovered and corrected and professional preparation improved.[9]

[8] L. W. Irwin, J. H. Humphrey, and W. R. Johnson, *Methods and Materials in School Health Education* (St. Louis: C. V. Mosby, 1956), p. 353.

[9] J. D. Lawther, The College and In-Service Education, *JOHPER, 30:* 29–56, 1959.

Needs in Professional Preparation

1. The need exists for the establishment of minimum standards in college and university health education preparation programs designed to facilitate accreditation or certification as well as give a basis for self-improvement. This should be accomplished in cooperation with such organizations as the National Council for Accreditation of Teacher Education, the American School Health Association, the American Public Health Association, and the American College Health Association.

2. Further attempts should be made to include some health education in the professional preparation of school administrators and more health education for teachers. A questionnaire study by Bell indicated that over 60 per cent of secondary school teachers and 100 per cent of administrators felt the need for better health education preparation.[10]

3. The selection and recruitment of capable students for health education is an increasingly pressing problem. Both higher and secondary school health educators have responsibilities in this regard. The development of student scholarship programs and health education career publicity is imperative.

RESOURCES AND CONSULTATION SERVICES

Most colleges and universities recognize and encourage the use of staff personnel for consultation and as resource persons for school and community service. Particularly in the field of health education, perhaps because of the nature of the field, are such staff eager and willing to assist schools in planning programs and in solving problems as they arise.

The opportunity for keeping informed is probably better for the faculty in college and university health education because of the usual higher degree of specialization. For this reason, and by virtue of the functions of the position, it is also possible in many instances to develop a broader perspective of the issues, problems, and trends in health education. One of the responsibilities, therefore, of the college or university health educator is keeping up to

[10] E. T. Bell, An Analysis and Appraisal of Pre-Service Preparation in School Health Education, *J. School Health, 26:* 256, 1956.

date in health education and other closely allied fields and helping to inform school people of recent developments in these fields.

Curriculum development and the many ramifications related to the school health program is an area where particular assistance is needed and often requested. Since the aim of health education, aptly expressed by Rash, is "intelligent self-direction of health behavior,[11] college and university health educators can contribute to this end. Through co-operative planning, leadership has been and can be provided in methodology, unit development, courses of study, statements of health philosophy, and effective utilization of health materials.

Needs Related to Resource and Consultant Services

1. Although greatly improved in recent years, the need still exists for greater rapport between schools and colleges and universities in the development of school health programs. This includes co-operative planning, development of and participation in institutes, workshops, program evaluation, scope and sequence of health content, and school health councils or committees.

2. The need is felt for active participation, on the other hand, of elementary and secondary school personnel in the enrichment and improvement of college and university health programs. In this way such programs may be kept "out of the clouds" and greater practicality developed.

RESEARCH, PUBLICATIONS, AND MATERIALS

The past several years have seen gigantic strides made in the publication of literature related to school health education and the recognition of the importance of health research. Only thirty years ago, according to Wilson, "the books on school health and health education could be counted on the fingers of one hand." [12] Today one finds a variety of printed resources intended for use in the elementary and junior and senior high schools including pamphlets, textbooks, syllabuses, periodicals, source books and others, not to mention the almost infinite array of supplementary materials and audio-visual aids. By far the majority of these publications

[11] J. K. Rash, Philosophical Bases for Health Education, *JOHPER, 31:* 35, 1960.
[12] C. C. Wilson, School Health Programs, *JOHPER, 31:* 37, 1960.

and teaching aids have been written or developed by college and university health educators. Notwithstanding the "publish or perish" stigma attached to certain of these works, the contribution to school health programs in this regard has been outstanding.

Along with the development of numerically more and better health preparatory institutions and the increasing acceptance of the importance of continued and periodic evaluation, research in school health education is gaining momentum. The significant studies to this date, however, like the literature of three decades ago in the field, could be counted on the fingers of a single hand.

Institutions of higher education are just beginning to plan research, both that of the faculty and that of students, toward desirable ends based upon gaps and needs in the field. Much of this planning, as an approach to research, is aimed at the specific improvement of elementary or secondary school health education.

Needs in Research, Publications and Materials

1. As inferred, the need exists for planned and co-ordinated research within and between colleges, universities, and elementary and secondary schools. Extensive gaps and unnecessary duplication are currently present in research devoted to school health education.

2. Exhaustive research is needed in almost all aspects of the field. Particular attention should be devoted to problems of student motivation, including teaching method and student behavior, the identification of content, and the organization of health education experiences.

SUMMARY

Universities and colleges must continue to provide stimulation, encouragement, assistance, and leadership in the development and improvement of school health education programs. On the other hand, the leadership role of higher education institutions cannot be properly demonstrated without support from elementary and junior and senior high schools. It is only through a continued team approach to the complexities and problems in health education that objectives can be realized and school health education programs improved.

Observations of College Students in Acute Distress

ALICE ICHIKAWA, UNIVERSITY OF CHICAGO

MANY students come to a university mental health clinic because of difficulties arising from an acute situational stress. The young college student is in a new setting away from home and close parental ties, with greater opportunities for new experiences and keener competition. Some students respond to these changes in their lives by becoming acutely upset. We will report which of these problems are handled in the initial application process by the social worker and what factors may contribute toward their early resolution.

The interest over the years in brief or goal-limited therapy has special relevance for the kinds of situations dealt with in a college setting. Franz Alexander, T. M. French and the staff of the Chicago Institute for Psychoanalysis first introduced efforts to define the basic principles that make possible a shorter and more efficient means of psychotherapy.[1]

Mary Sarvis, Sally Dewees, and Ruth Johnson state that relatively time limited ego-directed psychotherapy is a method of choice for a wide range of patients. They believe that many patients if seen promptly can be helped to achieve adaptive integration out of the disruptive experience with this kind of psychotherapy, and they describe how timing and spacing of therapeutic transactions can be done usefully and economically.[2]

Peter Blos has written several articles pertaining directly to the

[1] *Psychoanalytic Therapy* (New York: Ronald Press, 1946).
[2] A Concept of Ego-Oriented Psychotherapy, *Psychiat., 20:* 277–287, 1959.

college student. In his article on psychological counseling he states that young people in college tend to maintain adolescent modes of adaptation that reactivate and precipitate personality disturbances that interfere seriously with successful life, academically and socially. He feels that psychological counseling services that are intramural with a simple but effective referral system can detect maturational disturbances at an early stage and facilitate resolution of the acute conflict.[3]

CLINIC STRUCTURE

Twenty-five per cent of the patients seen in the University of Chicago Student Mental Hygiene Clinic have been helped to resolve difficulties presented by acute stress in one or more interviews. Since the help of the Clinic is readily available to all students, many do use the service who would not ordinarily go to a psychiatric clinic or to a psychiatrist in private practice.

Appointments are made through the Clinic secretary either by telephone or in person. All new applicants are seen by the social worker. There is virtually no waiting period, and students are seen either in the order in which they apply or immediately, if the distress is acute. The primary focus of the intake interview is on presenting difficulties and evaluation of the problem with the student to determine what he is seeking and whether the services of the Clinic are suited to his needs. Assessment of the severity and the urgency of the situation is made, and a decision is promptly made as to the next step.

PROBLEMS PRESENTED

Students often come in to discuss their problems prior to an important decision or in anticipation of some experience that may seem frightening to them. This accounts for the high number of applications soon after arrival on campus or before Christmas vacation, comprehensive examinations, and graduation. Students who have not adequately dealt with feelings of separation from

[3] Psychological Counseling of College Students, *Amer. J. Orthopsychiat., 16:* 571–580, 1946.

home will often become acutely upset when they meet with frustrations such as low marks, termination of a relationship with a girl or boy friend, or a family emergency. Many students come in when dating imposes demands that are in conflict with values learned at home.

Some students who have severe personality problems are able to compartmentalize their problems and to be effective in their academic efforts until they are exposed to an unusual stress. These students sometimes can be helped in a relatively short time to integrate the insight gained about the current experience and return to their previous functioning.

CASE ILLUSTRATIONS

1. A twenty-year-old third-year student came to the Clinic before the end of the quarter. She was anticipating marriage and complained of anxiety following a dream. The mother had agreed to the marriage, and plans for the future sounded reasonable. She described a good relationship with her fiance, who was practicing medicine in another part of the country, where she expected to resume her education.

The setting for the dream was a party where she was being prevented from joining an older man who was both attractive and frightening to her. She was with her mother and seemed unable to leave her, so she returned home with her. The sophisticated girl interpreted her dream to mean that she must not want to get married. She began to doubt her decision and wondered whether she really loved her fiance.

Exploration indicated that the patient's father had died when she was five years old, and she and her mother had been quite close. She still lived with her mother, and her marriage would mean separation from her for the first time. We did not talk about her infantile conflicts, but we talked about what seemed obvious—her feelings about separation from her mother and about living with someone else. Expression of her doubts and of her mixed feelings seemed to relieve her even during the first inter-

view. In the second interview, she stated that she felt more comfortable and was going ahead with her plans.

2. Another wide-eyed young college student was referred by the house head of her dormitory because instead of acting in her bubbly, enthusiastic manner, she had become depressed, despondent, and tearful when she received notice of her low marks on return from Christmas vacation. The first year she had done well academically and had lived in a dormitory with other entering students. She was caught up in the excitement of new experiences and participated in many social activities. She returned for her second year with expectations that things would go in the same light vein. She had moved to another dorm to cut down on expenses and was no longer with the same group of girls. Demands for her courses were greater, and dates were not as frequent. With a drop in grades, the patient became very anxious, assuming blame for all her difficulties. She had done very well in high school and achieved much attention in her community for her musical ability. She blamed inability to study on the noise in the dormitory and had moved only to find it noisier and was asking to move again. Dissatisfied with her classes, she began to change instructors. She stayed up all night talking to matrons about her parents—how good they were to her, and how she had failed them.

Her response seemed to be a delayed separation reaction from home. Because of her past performance she had an exaggerated expectation of herself. That her parents had not reprimanded her but had accepted the low grades further increased her guilt and her need to project her own frustrations onto external reasons. Changing rooms, changing class instructors, talking to night matrons seemed to be her effort to re-establish a familiar situation. It was clear even in the first interview that she wanted to use the social worker as a substitute for her mother. Seen for three sessions, the patient quickly gained insight about her reaction to leaving the protective relationship offered by her parents and her fears of having to assume some responsibility for herself. Rather than transplant the dependent relationship to the therapist by continuing regular contact, she was encouraged to reach out into the community for those experiences that would help her in the

maturation process. A follow-up interview indicated that she was trying out new types of relationships and appeared to be making considerable progress in coping more adequately with her total situation.

3. A twenty-six-year-old married student had recently enrolled as an undergraduate. His self-referral to the Clinic followed an episode late at night when he had suddenly come upon a man being slugged by another. The incident precipitated acute anxiety in which he began to fear violence to himself and to his wife and to fear the loss of his sanity. The resultant anxiety totally immobilized him, and he was no longer able to cope with his school work. Every moment when separated from his wife he was preoccupied with thoughts of violence—such as his wife being kidnapped.

His wife had employment that entailed late working hours and made it necessary for him to accompany her home. Her job not only interrupted his studying, but also limited the hours he could be with her. The student's only conscious thoughts, however, were of utter gratitude to her for his being able to continue his education.

Exploration indicated a tremendously deprived background in which his parents had separated shortly before his birth and he was brought up by elderly relatives. When he was six, the mother remarried and took him to live with her. The stepfather assumed responsibility but was never close to him. The mother had become involved in a fundamentalist religion in which much of her time was occupied in working for the church. Many times he recalled coming home from school, finding her gone, and being frightened that Christ had come and taken mother away. Finally, at the age of fifteen he could no longer tolerate the pressures of the religion and his mother's involvement in it. He left home and became essentially self-supporting. He worked at menial jobs and through persistence in attending night school had earned enough credits to enroll at the University. He had been married a year when he came to the Clinic.

In spite of the marked deprivation he had experienced, he had tremendous drive for helping himself. He revealed many ego resources, as demonstrated by what he was accomplishing in his life.

The problem seemed directly related to the dependency on his wife and the demands her odd working hours made upon him. Rather directly, the social worker clarified the connection between his anxiety reaction and his current situation. He began to be able to admit his irritation toward the work arrangement and toward his wife. As he did so, the physical feeling of helplessness disappeared, and though he was able to cope better with the situation in not fearing the loss of control, he felt badly because of what his wife was doing for him.

The student described having the same feelings as he had had when his mother was not at home. Efforts were made to point out the helplessness he had felt as a child in relation to his mother and how he was reacting to the relationship with his wife with the same feelings. Recognition of his overreaction in much of his feeling toward his wife made the current stress more understandable. Though not sophisticated, the patient seemed responsive and could integrate the experience of freer expression of feelings, and in four interviews he showed ability to cope with the situation. He wanted to try on his own, and contact was mutually terminated with the understanding that the patient could return at some future time should he so desire.

DISCUSSION

Just as it is necessary to give support to young adults when needed, it is equally important to allow them to be on their own when they feel adequate. When asked whether they want regular interviews to discuss their problems, they frequently respond: "Oh, I don't want to come in every week, but I'd like to come in when I run into another problem." It is important to encourage them to try out their own ideas and not to interfere in their efforts toward maturity.

The opportunity to talk about their problems at the moment of distress with an interviewer who helps them to see the situation in a more orderly and reality-oriented framework makes the problem less overwhelming. For most, the contact with the Clinic is the first opportunity to talk to someone who listens and believes that what they say is of utmost importance. The communication of a

firm conviction that the students we see are individuals who have achieved considerable growth and are capable of further maturity is particularly significant to the college-age group. The interviewer understands the regressive, more infantile reactions to stress but also recognizes that part of them are striving for more adult behavior. One student commented, "The most helpful thing is that you seem to feel I'm not entirely in the wrong and that I have some ability to handle my problem." Assistance given when needed provides an opportunity for them to reassemble their defenses in such a way as to obtain more gratification from their environment and to encourage their efforts in the maturation process.

What the Clinic has to offer is explained to the student, but we attempt to leave the responsibility for seeking help to him. Pressuring students to get help is interpreted by the student as a continuance of parental authority, which they are trying hard to renounce. The fact that the student is given the responsibility for making a choice is in itself of great importance. One student was told that continuing was up to him and, should he decide that he wanted another appointment, he could call. He telephoned, leaving the message that after thinking the situation over he wished to try on his own and emphasized that he had been given the choice and that this was his decision.

In handling situations at the intake level, it seems more effective when one person sees the patient through the entire process. We recognized that students often do not follow through when they are assigned to another person. When one person is responsible there has not been a single failure to keep a second appointment with the same person. It would seem that after having opened up to one person at the moment of stress, the student who is shifted to another therapist loses a sense of continuity and is less motivated to begin over again.

We recognize and utilize the inherent growth potentialities in the student. Rather than to encourage reliance upon a therapeutic relationship, we attempt to allow and encourage the student to find gratification in the University environment. The "door is left open" so that contacts can be easily renewed. Of students who were seen in the last academic year, 26 per cent were known

to us previously. The bulk of these former patients were those who came in for limited service on some specific issue or others with vaguer difficulties, but nonetheless seemed to get support at the time. A significant number who failed to accept the initial recommendation for treatment returned after a lapse of time when they themselves were ready to use our services.

SUMMARY

In a college setting, service is given students who often have no definite symptom pattern but temporarily have become overwhelmed by an acute life situation. Offering service at the point of stress when they seek help is of importance. Selection of students who can be helped at this supportive and remedial level is done on the basis of sound diagnostic understanding of the total situation, including an adequate assessment of ego resources. We intervene in the student's life to foster his ego adaptive capacity within the context of his present situation. The focus on his current reactions enhances his ability to assume responsibility for his problem and assists him in coping with his acute situational stress, thus enabling him to continue in the maturational process.

Dental Survey of Montana State College Freshmen

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A STUDENT health committee, composed of students and faculty, has considered for some time various areas of expansion of the health services now provided at Montana State College. The committee suggested that a dental survey be conducted in order to determine the condition of the teeth of the incoming freshman class. Information relating to tooth decay was deemed necessary before any large expenditure of Health Service funds for starting a corrective program could be considered.

SETTING UP THE SURVEY

Members of the Student Health Committee discussed various aspects of a survey with the Director of the Dental Division of the State Health Department, and with members of the local county dental society. It was agreed that a combination of a short dental questionnaire, and a dental survey would give us the most information at the least expense. The purpose of the questionnaire was to correlate the history of previous dental care with the actual findings at the time of the dental survey. To ensure that the survey would be statistically significant it was planned to give dental examinations to at least 50 per cent of the incoming freshman

students. In a final analysis 861 students out of a group of 1,055, or 81.6 per cent, were examined.

CONDUCTION AND FINANCING OF THE SURVEY

The actual dental survey was under the direction of Dr. Trithart. Through his facilities three portable Archer dental chairs, three Wilmot-Castle dental lights, three Bard-Parker sterilizers, and nine dozen dental mirrors and explorers were made available. Each dentist had a student assistant to record his findings, and several roving assistants were used to sterilize instruments during the course of the survey.

Eleven dentists participated in the survey. It may be worthy of mention that ten of these dentists had previously participated in large-scale survey programs of this type for elementary school and high school students, so the techniques employed were familiar to them.

By using the personnel and procedures described above, it was possible to examine seventy-five to eighty students per hour. The only expense incurred by the Health Service during this survey was the payment of the local dentists for their time spent doing these examinations.

CRITERIA OF MEASUREMENT

The well-known and widely used DMF index developed by Klein, Palmer, and Knutson was used to measure dental caries experience in permanent teeth and levels of dental care.[1] The D indicates the number of decayed teeth, M the number of missing teeth due to caries, and F the number of teeth satisfactorily filled.

RESULTS AND CONCLUSIONS

During the Freshman Week in September 1960, 1,055 students were given physical examinations, and, of these, 861 students were examined by the dentists. In this group it was found that

[1] H. Klein, C. E. Palmer, and J. W. Knutson, Studies on Dental Caries, *Public Health Rep., 53:* 761–765, 1938.

860 permanent teeth had been lost. A total of 8,946 teeth had been filled, and 1,169 teeth showed decay.

Inspection of the bar graphs, Figure 1, reveals an average lost permanent tooth index of 0.9 for the women and 1.1 for the men. It may seem paradoxical that women of all ages average 1.9 more filled teeth than men of all ages but still have a lower lost permanent tooth index. The D/F ratio of 1:10 for women and 1:6 for men reveals that the women experience more dental decay than the men, but are more prone to have their dental decay properly treated. The composite ratio of 1,169 unfilled decayed teeth to 8,946 filled teeth for a D/F ratio of 1:8 indicates good dental care.

An interesting finding to come out of this survey was the rate of fracture of the anterior teeth. Eight per cent of the incoming male students had experienced fractures of the anterior teeth, whereas

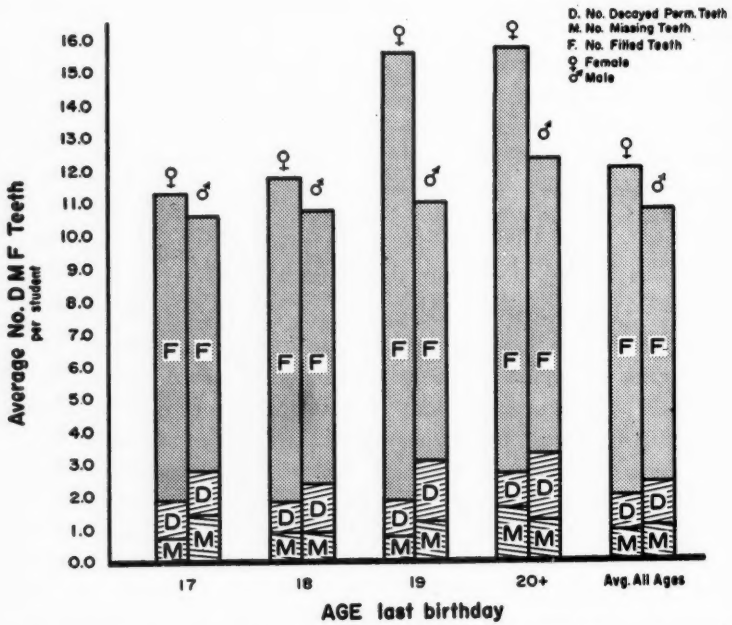

Figure 1. Numbers of decayed, missing, and filled (DMF) teeth noted among 321 freshman women and 540 freshman men at Montana State College in the fall of 1960

only 1 per cent of the women had experienced such accidents. We feel that this dramatically emphasizes the need for mouth protector programs in high school athletics. To state this another way, there were forty-three male students with fractured anterior teeth, and of this number twelve, or 28 per cent were found to be members of the freshman football squad.

The dental questionnaire, presented as Table 1, shows the percentage of affirmative answers to each question. Unfortunately, there was no system of identification on the questionnaire that would allow us to further break down these percentages according to sex.

It will be noted from the questionnaire that 83 per cent of the students answering the question, "Have you had a dental examination within the past six months?" have answered, "Yes." This percentage may be misleading, however, as 217 students did not answer this question. If this group who failed to answer question 3 are considered to have answered negatively, then the percentage falls to 65 per cent. Only fifty-five students, or 5 per cent, replied that they had not had a dental examination within the past two years.

These answers to the questionnaire seem to correlate well with the D/F ratio and are further evidence that family responsibility for good dental care is being exercised.

Table 1. Dental questionnaire with the percentages of affirmative answers given for each question

		% aff. ans.
1. Do you think your teeth are in a state of good repair?	Yes.. No..	86
2. Do you have a family dentist?	Yes.. No..	84
3. Have you had a dental examination within the past six months?	Yes.. No..	83
If not within the past six months, within the past two years?	Yes.. No..	84
4. Do you believe that a dental examination every six months is necessary for you?	Yes.. No..	70
5. Do you think the present group of toothpastes and powders prevent tooth decay?	Yes.. No..	48

SUMMARY

From this survey it is evident that the dental health of the Montana student is at a good level and has been well cared for by the existing facilities for private care.

The value of this survey for other colleges lies in the fact that it revealed a more accurate appraisal of the problem than could be achieved by any other means and thereby propagated a reasonable and sound decision on the matter. The survey was easily and quickly set up. It was inexpensive and obviated an unnecessary and large expense.

A Method of Statistical Reporting

THOMAS J. GRAY, M.D., SAN JOSE STATE COLLEGE

IN an effort to achieve a more accurate and comprehensive accounting of its activities, the Student Health Service of San Jose State College has developed a new method and format which combines in one summary pertinent information for general administrative, clinical, and financial review. Detailed analysis and evaluation in each of these spheres demands, of course, additional qualifying reports and supplementary breakdowns. However, such a comprehensive summary, kept as concise as is consistent with true full accounting, would seem to have the obvious value of affording a correlated, over-all "look at the whole picture" to all concerned. It is offered not only for consideration by individual health services, but also in the hope of contributing suggestions or ideas toward the resolution of the problem of achieving uniformity in such reporting.

The method involves the relating of units or occasions of service in each personnel category to the individual components of an over-all formula or outline of operation. From an administrative standpoint, both within and beyond the department, this tends to "tie down" the operation by clarifying with sharper definition and classification. Clinically it affords an opportunity for good organization and differentiation in broad terms and categories, and leads directly into a means of establishing the much-desired uniformity in morbidity reporting. From a financial standpoint, the method is in accord with, and in terms of, procedures which

can be developed for cost analysis and accounting in the interests of budgetary planning, justification, and control.

It is in this latter area of finance (dreaded by all) that statistical reporting seems to be assuming increasing significance. This is not surprising when one considers the ever-mounting costs of medical care and health service along with the rising cost of higher education. Under such circumstances, it seems inevitable that all student health services will become increasingly subject to ever more careful and exacting financial scrutiny. As John R. Moore, Administrator, Cowell Memorial Hospital, University of California, has so ably expressed it, "The major problem of agencies bogged down in budget troubles, such as inadequate funds, is that they do not give the kind of information needed to convert work units into dollar amounts. This is particularly true of student health programs. The more the budget officer knows about your program, the better will be his opportunity to help you obtain necessary funds." [1] It would appear vital, then, in order to assure continuing integrity and progress, for all student health services to provide the fullest, most meaningful accounting possible of all the activities inherent in their true functioning.

The first step is the preparation of an outline or formula of operation, and this approach would seem to give great promise of achieving uniformity inasmuch as almost all student health services have a common core of functions, procedures, and activities. Individual categories in such an outline should necessarily be kept broad enough to keep the report as concise as possible, yet specific enough so that no essential function is omitted. Supplementary reports and breakdowns provide an opportunity for more extensive and detailed analysis, as well as affording a means of accounting for functions and activities extending beyond the typical pattern of student health service.

Such an outline of operations is shown, for purposes of illustration, in a sample format in Tables 1 and 2, containing entries for the school year 1959–1960 at San Jose State College. The outline, as it is incorporated in the format, has been derived essentially from the formula of Health Service Standards for California State

[1] J. R. Moore, Cost Analysis and Budgeting in Student Health Services, *Student Med.*, *8:* 260–261, 1960.

Table 1. Statistical summary, Student Health Service, San Jose State College, school year, 1959–1960

Services provided for students (enrollment: regular students 10,216; limited students 3,716)	Pro-cedures*	Units of service: Physi-cians	Nurses	Tech-nicians	Sec.-recept.	Totals	
I. BASIC SERVICES							
A. *Examinations*							
1. Admission	5,840	5,840			23,360	29,200	
2. Follow-up (920) (included under Class II-A-1)					920	920	
3. Phys. ed. rating	678	678	678		678	2,034	
4. Teacher training	970	970	1,009		1,009	2,988	
5. Credential	807	807	845		845	2,497	
6. Special & miscellaneous, including athletic (nonvarsity), intramural, bus driver, staff	295	295	295		295	885	
7. Dental survey (not implemented)							
8. Audiometer	2,256		2,256		2,256	4,512	
9. Visual screening	2,246		2,246		2,246	4,492	
10. Tuberculin test	2,121	2,121	4,103 (1,982 readings)		4,242	10,466	
Totals	15,213	10,711	11,432		35,851		57,994
B. *Counseling* (not treatment)							
1. Follow-up (I-A)							
2. Student problems	58	58			58	116	
3. Other (staff, etc.)	33	33	33		33	99	
Totals	91	91	33		91		215
C. *First aid, emergency care*							
1. Regular students	123	123	150		123	396	
2. Limited students	5	5	11		5	21	
3. Faculty	12	12	12		12	36	

* Not included in units of service.

Table 1 (continued)

Services provided for students (enrollment: regular students 10,216; limited students 3,716)	Units of service					Totals
	Procedures*	Physicians	Nurses	Technicians	Sec.-recept.	
4. Administration						
5. Employees	28	28	35		28	91
6. Other (visitors, etc.)	7	7	7		7	21
Totals	175	175	215		175	565
D. *Public health*						
1. Food services						
2. Food handlers						
3. Housing inspection	(Not implemented—under jurisdiction of City Health Department except					
4. Health and safety	for local staff committee appointments and frequent informal surveys by					
5. Sanitation	director)					
6. Communicable disease						
7. Civil defense disaster						
8. Radioactive						
Totals						
E. *X-ray* (*films*)						
1. Minifilm	2,256	4,512 (readings)		2,256	4,512	11,280
2. 14 x 17	315	315 (readings)		315	630	1,260
3. Other	8	8 (readings)		8	16	32
Totals	2,579	4,835		2,579	5,158	12,572
F. *Clinical laboratory*	327			327		327
G. *Medical, nursing*						
Advisory (Lab School Sessions)	224		224			224
H. *Administrative*						
1. Meetings						
a. Staff	49	38	10	2	5	55

f. Meetings						
a. Staff	49	38	10	2	5	55

Table 1 (continued)

Services provided for students (enrollment: regular students 10,216; limited students 3,716)	Units of service: Pro-cedures*	Physi-cians	Nurses	Tech-nicians	Sec.-recept.	Totals	Totals
b. Scientific c. Committee d. Conferences e. Other	200	200	11	2	2	215	
2. Lectures	8	8				8	
3. Miscellaneous							
a. Correspondence (estim.)	1,000	500			1,000	1,500	
b. Telephone (")	4,500	4,000	500		4,500	9,000	
c. Duplicating (")	200				200	200	
d. Other							
Totals	5,957	4,746	521	4	5,707		10,978
TOTAL PROCEDURES, CLASS I	24,566						
TOTAL SERVICES, CLASS I		20,558	12,425	2,910	46,982		82,875
II. CLINICAL SERVICES							
A. *Outpatient* (*patient visits*)							
1. Appointment	8,823	8,823	10,323		9,533	28,679	
2. Nonappointment	10,105	10,105	11,151		10,166	31,422	
Totals	18,928	18,928	21,474		19,699		60,101
B. *Immunizations*							
1. Dip.-tet.	422		422		422	844	
2. Influenza	504	4	500		504	1,008	
3. Polio	1,124		1,124		1,124	2,248	
4. Smallpox	397	3	1,142 (716 readings)		394	1,539	
5. TAT	8	8	6		2	16	

Table 1 (concluded)

Services provided for students (enrollment: regular students 10,216; limited students 3,716)	Units of service: Procedures*	Physicians	Nurses	Technicians	Sec.-recept.	Totals	
6. T-T	425	93	332		352	777	
7. Typh.-Paratyph.	1,021		1,021		1,021	2,042	
8. Other	16	1	15		15	31	
Totals	3,917	109	4,562		3,834		8,505
C. *Diagn. x-ray (films)*	2,406	2,406 (readings)		2,406	2,406	7,218	
D. *Clinical laboratory*	7,744		462	7,744		8,206	
E. *Physiotherapy*	4,458			4,458		4,458	
TOTAL PROCEDURES, CLASS II	37,453						
TOTAL SERVICES, CLASS II		21,443	26,498	14,608	25,939		88,488
III. OPTIONAL, SUPPLEMENTAL SERVICES							
A. *Intercollegiate athletics*							
1. Examinations	280	280	280		280	840	
2. Injuries (patient visits) (included under Class II-A; 1,200 estimated)							
3. Diagn. x-ray (films)	481	481 (readings)	145	481	481	1,588	
4. Clinical laboratory	474			474		474	
5. Physiotherapy	242			242		242	
Totals	1,477	761	425	1,197	761		3,144
B. *Infirmary* (admissions)	213	434 (visits)	546 (pt. days)			980	
C. *Dental Treatment* (not implemented)							
TOTAL PROCEDURES, CLASS III	1,690						
TOTAL SERVICES, CLASS III		1,195	971	1,197	761		4,124
TOTAL PROCEDURES, CLASS I, II, III	63,709						
TOTAL SERVICES, CLASS I, II, III		43,196	39,894	18,715	73,682		175,487

Colleges,[2] with some alterations, revisions, and additions. Inasmuch as this formula was developed from a number of local, state, and national studies, including recommendations made at the Third National Conference on Health in Colleges (New York, May 1947), as embodied in the Leonard Report,[3] it is felt to represent quite closely the typical national pattern of student health services.

It should be noted in the sample format that the outline of operations is divided into three large classes: I, "Basic Services"; II, "Clinical Services"; and III, "Optional, Supplemental Services." This is occasioned principally by differences in the method of financing these services in the California State Colleges: Class I being state-provided, Class II being student-provided through state fee, and Class III being student-provided through local student body fee. The terminology of these major classes in the format could be considered applicable, however, to types of operations or procedures without reference to their means of financing; such designations could be adapted, altered, or even omitted in the interests of uniform reporting.

With the inclusion of the various personnel groups in the format, the next step is the selection and definition of units of service involved in each of the personnel categories as they may be concerned with the operational function designated. It is recommended that here too the definition be kept broad, at least initially, to avoid becoming involved in the collection and recording of an overwhelming mass of data. It is possible, of course, to split services into an almost infinite number and variety of units: obviously too fine a differentiation is neither practicable nor feasible. The degree to which this is carried in a given health service will depend upon such factors as the record system in use, facilities for records, personnel time available, etc.

At San Jose State College, where time available for statistical reporting is at a premium, detailed analysis and differentiation of

TOTAL SERVICES, CLASS I, II, III..... 43,196 39,894 18,715 73,682 175,487

[2] California State Department of Education, Division of State Colleges and Teacher Education, *Health Service Standards for California State Colleges* (May 1958; rev. Jan. 1960. Great credit is due all the members, past and present, of the California State College Health Committee, for their outstanding contributions in the development and establishment of the formula of standards.

[3] A. Leonard, A Proposed Program of Student Health Services in California State Colleges, California State Department of Health survey adopted by California State Department of Education, *California's Health, 6:* 129–131, 1949 (see Bibliography).

units of service are not attempted; nor has there presently been any attempt to relate different units of service together in any system of equivalence. Some of the entries represent more or less discrete, single procedures (particular types of examinations, tuberculin tests, etc.), whereas other entries comprise groups or totals of many different types of procedures (laboratory tests, nurse assists, etc.). Examples of such units of service selected for the summary at San Jose State College are as follows:

Physician Category

Number of listed examinations performed
Number of x-ray films read
Number of tuberculin tests performed
Number of patient visits involved in the various procedures
Number of meetings attended (also letters dictated, telephone calls, etc.)
Number of immunization injections given
Number of patient visits at infirmary

Nurse Category

Number of assists in each of the listed examinations and procedures (including escort and preparation of patients for physician visits)
Number of tuberculin test readings
Number of audiometer and visual tests performed
Number of immunization injections given
Number of assists rendered in X-ray, Laboratory, Physiotherapy
Number of patient days in infirmary

Technician Category

Number of x-ray films taken
Number of laboratory tests performed
Number of physiotherapy treatments administered
Number of meetings attended

Secretary-Receptionist Category

Number of handlings involved in listed procedures (send-outs, call-ins, etc.)

Number of appointments made (examinations, patient visits, etc.)
Number of letters taken, transcripts made, telephone calls, etc.)
Number of x-ray reports prepared, etc.

It is to be noted that the entries in the summary represent totals of whatever units of service are selected in the particular procedures and categories concerned. Contributing detailed data is collected and compiled in separate breakdowns in each personnel category, which may be added to the summary as supplementary material if desired. Quite obviously, the basic requirement for uniform reporting would be the establishment of uniform criteria and definitions of units of service, agreed upon and accepted by all concerned.

Financial evaluation might well demand the most extensive elaboration, particularly if detailed cost analysis and cost accounting are undertaken. Under such circumstances, basic, individual, specific units of service must be carefully defined, timed, and weighted to bring them into equivalence. Full accounting, moreover, would entail the inclusion of capital outlay (cost of land, construction, equipment) with its appropriate amortization and depreciation, maintenance costs, utilities (prorated among departmental subdivisions on a square-footage basis), and the like. Needless to say, such extensive analysis requires the assistance of expert accountants, and it would seem foolhardy to undertake such a project without such assistance.

Although it is possible, as previously mentioned, to reduce medical services down to exceedingly minute units (such as the filling of a syringe), there is a point beyond which such efforts definitely become unprofitable and quite meaningless. In fact, cost analysis of most medical procedures is generally considered neither feasible nor valid, because of the wide variation between different procedures, between the same procedures applied to different patients, and as administered by different personnel.[4] This becomes obvious when one considers such relatively simple entities as the treatment of a "cold" or the giving of an injection. One patient may desire only a brief inspection and a simple prescription; another may re-

[4] H. Cotton, What Office Procedures Really Cost You, *Med. Economics, 37:* 90–91, June 20, 1960.

quire an additional twenty-minute discussion. Some patients take considerable wheedling and cajoling for an injection; others accept it uncomplainingly and expeditiously.

Accordingly, a more reasonable basis for good general accounting would seem to be total patient visits, which would tend to average out differences in patients and, to a degree, even differences in procedures. Many medical agencies, particularly hospitals, use only employee-days or man-hours as their basic personnel accounting unit.[5] This is not to say that certain procedures or types of service could not be profitably investigated and analyzed for specific studies (such as admission examinations, particular types of laboratory tests, etc.), particularly procedures subject to a high degree of standardization. What is questioned is the advisability of attempting (even with expert assistance) a complete analysis of all the separate factors or elements of all the multitudinous activities of a large medical installation. True cost accounting is all or none—either all the elements and factors must be analyzed, defined, and weighted for equivalence and all personnel time accounted for (including coffee breaks), or actual costs are in fact not determined and the results may be erroneous and misleading. Even trial-and-error budgeting, adjusted year by year, would seem preferable to halfhearted attempts at complete cost analysis. In this connection, it must also be remembered that cost accounting per se is not value accounting, and this may be misleading to the uninformed. Emergency service in the college setting, for example, usually shows a relatively low rate of utilization at a relatively high cost, but its importance and value are unquestionable; it is therefore vital to carefully qualify such cost if presented for general financial review. Only after a careful appraisal of its individual circumstances, needs, facilities, and resources, can a given health service reach a decision of how far it can and should go in this particular sphere.

In the clinical area, the Standard Nomenclature system provides an ideal means of achieving uniformity in morbidity reporting.

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[5] American Hospital Association, *Uniform Chart of Accounts and Definitions for Hospitals* (The Association, 1959), pp. 30, 47; M. T. MacEachern, *Hospital Organization and Management* (3d ed.; Chicago: Physicians' Record Co., 1957), p. 897 (nursing service), p. 910 (salary budget).

Table 2. Supplementary analysis, Student Health Service, San Jose State College, 1959–1960

A. *Outpatient physician visits (Class II-A) (adapted from standard nomenclature)*

TOPOGRAPHIC (system) / ETIOLOGIC	0–Prenatal	1–Infectious	2–Parasitic	3–Toxic	4–Traumatic, physical	50–Circulatory	55–Neurologic	6–Static-mechanical	7–Metabolic, endocrine	8–Neoplastic	9–Unknown structural	x–Unknown functional	y–Undetermined	Totals
0–General	22	534	2	46	199	3	..	14	711	3	2	497	220	2,253
1–Integumentary	20	1,824	272	846	1,199	8	1	11	328	287	154	13	30	4,993
2–Musculoskeletal	2	116	2	..	2,195	..	2	36	7	5	33	9	103	2,510
3–Respiratory	3	2,608	..	802	7	..	2	10	..	2	..	10	88	3,532
4–Cardiovascular	8	7	1	..	3	22	1	9	2	..	10	22	67	152
5–Hemic-lymphatic	..	35	..	1	24	4	4	5	119	8	3	4	108	315
6–Digestive	3	1,540	4	5	36	1	19	114	3	4	355	90	22	2,196
7–Urogenital	34	225	2	1	20	..	1	117	10	5	1	207	53	676
8–Endocrine	..	1	..	..	..	..	..	..	164	1	..	14	1	181
9–Nervous	..	18	..	..	24	1	6	2	5	6	7	24	116	209
x–Special sense	4	481	3	16	137	3	2	227	25	7	17	13	65	1,000
Totals	96	7,389	286	1,717	3,844	42	38	545	1,374	328	582	903	873	18,017

This system enjoys wide general acceptance, and although it is used perhaps most widely in hospitals it can easily be applied to outpatient services as well. It seems to be the only system which provides a complete clinical accounting of all cases, including those statistically infrequent, without duplication, overlapping, uncertainty, and inaccuracy of classification; it also permits integration with the projects or studies of any other type of medical enterprise or specialty reporting on the same basis.

The Standard Nomenclature system is relatively simple, and not at all as forbidding as the voluminous-appearing book would seem to indicate. It is simply a method of classification based upon both topography (anatomy) and etiology; it thus avoids the common and prevalent fault of indiscriminately mixing anatomic, etiologic, and even specialty designations, so noticeable in the many individual, arbitrary systems presently used in many health services. Those interested in the possibilities of the system should consult the standard text; a remarkably clear and concise explanation of the procedure is contained in the first ten pages.[6]

Ideally the system should be established and maintained by a qualified record librarian and appropriate staff; it can, however, be satisfactorily conducted with properly oriented nursing and secretarial personnel. In fact, nursing experience and judgment are often most advantageous, especially as applied to the interpretation of difficult or unusual cases. The health service at San Jose State College has embarked upon only the beginning of such a system, with the intent of establishing the entire program as recommended in the text, as allocation of personnel time will permit.

This beginning step involves a very simple correlation of only the major topographic and etiologic divisions, on the basis of what might be termed a "one-digit code"; it is incorporated as a supplementary breakdown of Class II-A (physician visits) of the sample summary (see Table 2). Broad and general as this breakdown is, it shows an interesting pattern well suited to the interests of a summary for over-all clinical and administrative consideration

[6] R. J. Plunkett and A. C. Hayden, eds., *Standard Nomenclature of Diseases and Operations*, published for the American Medical Association (4th ed.; New York: Blakiston, 1952).

and comparison. It would be most interesting to compare patterns on a like basis of health services all over the country, and this could be carried to its ultimate step by including in the system the means of conversion to International Statistical Classification.[7]

At San Jose State College, this part of the record is compiled by the emergency nurse on duty during evening class hours. She simply goes through the day's charts or records, looks up the indicated condition or diagnosis in the Disease Index of the standard text, and finds the page number which will enable her to place the entry according to code. Staff physicians are asked to provide diagnoses which are as definite and concrete as possible (they need not be in terms of Standard Nomenclature); doubtful or unusual cases which cannot be readily identified or placed are simply deferred for higher administrative decision the following morning. With good physician co-operation, the nurse is well able to pinpoint almost every case, and there have been remarkably few deferrals. The secretary in charge of the whole statistical program is, of course, co-ordinated in this part of the enterprise.

As previously stated, the entries in this part of the sample report represent physician visits—without regard for differentiating first or subsequent visits for the same or different conditions, or for the same or different patients. Such considerations could be incorporated in further supplementary analyses, or the tabulation might be based solely upon separate diagnoses as such. This latter method would afford perhaps a better relevancy within the context of a complete system of Standard Nomenclature, wherein each diagnostic entry requires a separate file card with the correct code number and title. The physician visit basis does, however, seem to provide a more accurate picture of total physician activity, especially for the purpose of summarizing for general review.

If the installation of a complete Standard Nomenclature system is contemplated, there are several factors which must be considered, such as the extensiveness of the coding desired or indicated, simple or cross indexing, group indexing, indexing of two or three (or more) digits, vertical- or visible-filing methods, infor-

[7] *Ibid.*, pp. 847–851.

mation to be included on index cards, and so on.[8] Certainly consultation with an experienced record librarian would seem invaluable. A gradual transition over to the full system might well be indicated, starting with complete classification in one or more of the major divisions, particularly those showing higher incidence, adding more and more divisions as time and facilities permit. On the other hand, it might well be just as easy or nearly so, for a nurse-secretary team to undertake the indexing of all cases as they are looked up one by one, rather than going through the trouble of having to select only those falling in certain categories. Again, this would depend upon the circumstances of the individual health service concerned.

Finally, the matter of further supplementary breakdowns, analyses, and reports would seem to be pretty much a matter of choice with the given agency, depending on individual indications, needs, and interests. At San Jose State College such supplements include simple tabulations and breakdowns of admission examination follow-ups, minifilm follow-ups, emergency calls, total physician visits in all categories, specialist-consultant visits (interdepartmental), outside referrals, number of prescriptions written, minor surgery, neoplasia, therapeutic injections, reportable communicable diseases, infirmary cases, x-rays, laboratory procedures, and physiotherapy treatments. Other examples might include breakdowns by sex, by first and subsequent visits, tuberculosis case-finding analyses, type and incidence of athletic injuries, and a host of others. A final word of caution—if too many exhaustive supplementary analyses are included, the real purpose of a summary, namely to summarize, is defeated, and one ends up with a confusing, voluminous document which serves only to annoy all concerned. Consideration might better be given to the separate submission of such material as it might be indicated or desired in the appropriate sphere.

In concluding, it should be emphasized that this method of statistical reporting is just a beginning; the base of the pyramid upon which it rests as a summary can be extended to almost any

[8] Inasmuch as this is beyond the scope of this presentation, attention is directed again to the standard text and additionally to reference number 5 (b), *ibid.*, pp. 770–780.

degree considered desirable or necessary. The achievement of uniformity among reporting agencies would, of course, demand unanimous agreement in the delineation of the dimensions of this pyramid, particularly in the definition and selection of its structural elements, namely units of service. Admittedly this would be a difficult and exacting task on any large scale, but if launched modestly with ample allowance for periodic revision and the incorporation of supplementary reports, the achievement of such uniformity would seem reasonably feasible.

(Complete sample formats are available upon request from the Student Health Service at San Jose State College.)

The following additional general references are recommended:

American College Health Association, *Proceedings* (The Association, 1955, 1956, 1957), and "Proceedings," *Student Med., 7:* 3–101, 1958; *8:* 5–116, 1959; *9:* 9–114, 1960; and *10:* 3–155, 1961.

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Present-Day Issues in Athletic Medicine*

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IN order to discuss the present-day issues in athletic medicine, it is first necessary to define what is meant by the term "athletic medicine." Essentially, "athletic medicine" is a phase or branch of medicine which is concerned with the responsibility for the prevention and the care of injuries sustained in athletics. The word "athletics," in its complete meaning, implies games, sports, or exercises which require physical agility, strength, and stamina in degrees that vary with the nature of the respective activities. On a college or university campus, there are four distinct facets in the over-all concept of athletic medicine, and these are: (1) the department of intercollegiate athletics, or its equivalent, (2) the intramural program, (3) the department of health, physical education, and recreation, or the like, and (4) the recreational activities—supervised and unsupervised.

Today we must be cognizant of medicine's obligations in these areas. This is a component of the college health program that has been dormant too long: it must be coped with at once. A survey of many campuses has revealed numerous instances of minimal health service participation in the athletic program and at some institutions, none. On any campus, it should and must be a duty of the health service to take the initiative and establish basic procedures. An informative and directing relationship should and

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must be established with: (1) the college or university president, (2) the director of intercollegiate athletics and the respective coaches, (3) the athletic trainer, (4) the intramural director, and (5) the department of health, physical education, and recreation.

It is the opinion of most educators today that extensive physical fitness programs will be firmly established components of the college curriculum in the very immediate future—if they are not already in existence. The present occupant of the White House and his predecessor have both deplored the physical fitness of our youth and they have taken positive steps to rectify it. Strong athletic programs on our college and university campuses are inevitable, and in these programs the health service must assume a significant role.

In defining athletic medicine, four distinct facets were established. For the purpose of simplicity, the present issues pertinent to each area will now be discussed.

THE DEPARTMENT OF INTERCOLLEGIATE ATHLETICS

The health service must take an active part in the intercollegiate athletic program at its respective institution. The physical examinations for sports participants should be conducted by the health service and fitness standards for each sport should be established. An active part should be taken in the conditioning and the dietary programs. The cleanliness and the sanitation of the athletic plant and sports equipment should be of more than a passing interest. Protective equipment must be a concern. The care of the sick and injured athlete is our responsibility, as is the rehabilitation of the injured. The team physician should be a health service staff member if at all possible.

Close, harmonious co-operation must exist between the health service, the director of intercollegiate athletics, the coaches, and the trainers. The right people must be kept informed of the incapacitated athlete's condition and progress, and an atmosphere of expediency must prevail. The object should always be to get the athlete back to his sport in good physical condition at the earliest possible date.

At the present time on many campuses there is a great lack of health service co-operation with the department of intercollegiate athletics. The assignment of a team physician from the health service staff is frequently nonexistent because of the feeling that the health service budget should not have to be the source of revenue which provides gratis to the sports program, the services of a physician. Certainly this is distorted thinking, but nevertheless, we must confess that it occurs.

The existing immediate issues in this facet can be summarized as follows: It is the responsibility of the health service to engage in a co-operative program with the department of intercollegiate athletics and to provide:

1. Physical examinations for competitive sports participants.
2. Assistance in the establishing of conditioning and dietary programs.
3. Participation in the sanitary inspections of the athletic plant and the sports equipment.
4. Competent care for sick athletes and care and rehabilitation programs for injured athletes.
5. A competent and interested team physician.

These services must be provided today, not tomorrow, if good medical care is to be an attribute of the intercollegiate athletic programs on our respective campuses. As doctors of medicine, we owe it to these young people to safeguard their health. The spirit of the Good Samaritan should prompt us to offer our assistance to the director of intercollegiate athletics without being concerned with the fact that the service is coming out of our budget and not his.

THE INTRAMURAL PROGRAM

This is a rapidly expanding program at all colleges and universities. The total number of individuals participating in intramural activities is constantly increasing. Unquestionably, the President of the United States will add momentum to the program through the "youth fitness" committee recommendations.

In this facet, the greatest present-day concern of the health service should be a constant surveillance of the program's physical

hazards. Intramural activities give rise to diverse types of injuries which must be treated by the health service. If the injury incident is great for some intramural event, it should be the duty of the health service to make the matter known at once to the intramural director.

Our duties in this category are to treat the injured, to think safety, to preach safety, and to effect safety. Our finger must be upon the injury pulse and our hand upon the telephone so that we can readily inform the intramural director where mayhem is being committed.

THE DEPARTMENT OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

This department is now recognized as being an essential and a highly reputable component of the college or university curriculum. The classes are conducted by educators with excellent academic backgrounds and the subject matter is presented in a planned manner.

Injuries do occur in physical education classes and it is the responsibility of the health service to care for such cases.

It is also the duty of the health service to assist this department by providing professional personnel to lecture in those classes where medical opinions are desired. The health service should express a willingness to participate in this program, for such action not only helps the department of health, physical education, and recreation with its subject matter, but it also adds prestige to the health service.

Many colleges and universities are now offering "Adapted Sports" or "Rehabilitation Exercises" as specific courses. These programs are primarily for physically handicapped students and the purpose of such classes is to establish beneficial exercise routines for the individuals concerned. The classes are usually conducted by registered physiotherapists. When such a program is existent upon the campus, the health service must work closely with the respective instructor in evaluating each student's existing handicap and in then establishing the exercise program to be followed. Essentially the health service provides the department with the

physical therapy prescription, performs follow-up examinations to determine progress, and recommends any program modifications indicated.

THE RECREATIONAL ACTIVITIES—SUPERVISED AND UNSUPERVISED

In this facet we are concerned with any and all athletic activities which are engaged in for recreational purposes. The athletic facilities upon all campuses are available for such purposes at specified times. Some of the activities have direct supervision and some have no supervision at all.

It is the responsibility of the health service to care for the injuries arising out of these varied enterprises.

The cleanliness and sanitation of all facilities which are available for this program must be a concern of the health service.

A survey of the injuries being attended must be constantly made, and existing hazardous areas of this program should be discussed with the responsible persons. Here again, we are in a sense, safety engineers, and for the good of all concerned it is essential that we assert ourselves.

The four facets of athletic medicine have now been individually considered and our responsibilities in each have been mentioned. The basic purposes of athletic medicine are prevention and care, and for the cited areas the health service must establish a good program as part of its campus obligation.

In thinking about the subject matter of this presentation, one might conclude that the greatest number of man-hours needed to provide an athletic medicine service would be required by the department of intercollegiate athletics. Actually this is an erroneous contention. The total number of man-hours needed will vary with the nature of the institution but percentagewise, the breakdown will be almost universal with the following representative figures:

Department of intercollegiate athletics	25% of total hours
Intramural program	40% of total hours
Department of health, physical education, and recreation	20% of total hours

Recreational activities—supervised and unsupervised 15% of total hours

Seventy-five per cent of our efforts in athletic medicine are directly related to the activities of the general student body and only 25 per cent are concerned with the department of intercollegiate athletics. Certainly the present-day issues of athletic medicine are general campus matters and it is the unfailing duty of the health service to recognize them as real and immediate responsibilities.

Student Suicide at Oxford University

The Relevance of a University Health Service to Student Mental Health

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THE problem of student suicides at Oxford University received most attention in professional journals, the public press, and at the University itself in the period 1950–1955. The last figures available from the Registrar General's Statistical Review are for 1956. For these reasons the writer has given particular, although not exclusive, attention to the period 1950–1955.

Official university statements and both professional and popular literature reveal different approaches. To the University, the number of student suicides constitutes unpleasant publicity and a potential threat to the autonomy of the colleges. The public attitude has been one of concern. Professional concern has been directed at seeking explanations for the high Oxford suicide rate. The urgent need for serious consideration can be seen in the figures in Table 1 for the period 1948–1958.[1] In this period the national population of England and Wales in the age group twenty to twenty-four was 2,856,000. The national suicide rate per 100,000 was 4.1. In this same period the Oxford Univresity suicide rate per 100,000 was 26.4. Compared to the over-all national suicide

[1] A. Rook, Student Suicides, *Brit. Med. J.*, I: *No. 4867*, 600, 1959.

Table 1. Incidence of student suicides, 1948–1958 (white males)

Group		Approx. population (yearly av.)	No. of suicides	Period of observation in yrs.	Annual rate per 100,000
England and Wales	Men	1,394,000	767	9	6.1
(age 20–24)	Women	1,462,000	282		2.1
	Total	2,856,000	1049		4.1
Oxford Univ.	Men	5,250	16	10	30.5
	Women	800	....		....
	Total	6,050	16		26.4
Cambridge Univ.	Men	5,950	13		21.8
	[w. men	5,600]*	[10]	10	[17.8]
	[col. men	350]	[3]		[85.7]
	Women	630	1		....
	Total	6,580	14		21.3
7 British	Men	15,000	10	8.5	7.9
Universities	Women	5,000	....		....
	Total	20,000	10		5.9
University Coll.	Men	2,500	3	7	17.1
(Univ. of London)	Women	1,000	1		....
	Total	3,500	4		16.3

* The original chart contains an additional computation based upon 5,600 white males at Cambridge. Why the author gave this figure in a chart designated as white males is difficult to say, but the implication is that 350 of the students included in the Cambridge survey were nonwhite males. For the sake of clarity these figures have been shown parenthetically, but it would appear that the total of 5,950 men for Cambridge includes some 350 nonwhite males.

rate for England and Wales in 1948–1951, which was 11.0 per 100,000,[2] the Oxford University student suicide rate is startlingly high.

Until recently figures have not been kept on student suicides or on cases of emotional or mental illness among students. In a private communication to the writer Dr. R. W. Parnell, of the Warneford Psychiatric Hospital in Oxford, warns that available

[2] *Lancet*, CCLXXII: *No. 6961*, 322, 1957.

figures represent a minimal proportion because they do not include students seeking advice away from Oxford or from private physicians.[3] Similarly, student suicides do not include those occurring in vacations, away from Oxford, or for which no reports are available. A further difficulty is that the lack of a university health service means that there are no accurate and comprehensive statistics about student health. College records are useless for this purpose. The colleges keep records for financial purposes, not for recording sickness. Studies must rely on what information can be secured from the colleges, the police, and the local hospitals; and available information can be considered neither complete nor comprehensive.

The first and only survey on Oxford University was that made in 1951 by Parnell on the mortality and prolonged illness rates of undergraduates during the period 1947–1949. He defined prolonged illness as that causing the loss of at least one full term's residence (eight weeks), and contrasted the illness and mortality rates of Oxford undergraduates with those of the same age group for the general population. The study showed definite differences between Oxford and the nation. Parnell found that deaths from violence (accidental) and suicide were most common among undergraduates, and deaths from tuberculosis and violence (accidental) were the ranking causes nationally. He also found that the annual death rate from all causes per 100,000 was higher at Oxford than for England and Wales, being 217.9 and 183.4 respectively.[4] Parnell implies a connection between mental health and suicide. His findings indicate that in the cases of 145 undergraduates who missed at least one full term's residence, mental illness, including nervous breakdown, was responsible for 52.5 per cent of the absences.[5] These figures are only approximate because there is no available information about unsuccessful suicides which are known to have occurred in the University. Oxford has no agency for notification, nor is there a central registry, of cases of ill-health or student deaths.

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[3] Jan. 20, 1961.

[4] R. W. Parnell, Mortality and Prolonged Illness among Oxford Undergraduates, *Lancet*, CCLX: *No. 6653*, 731, 1951.

[5] *Ibid.*, p. 732.

Bearing the above in mind, a study of Oxford University student attendance for psychiatric help is of interest. Drs. Ian Skottowe and R. W. Parnell made a study of student admissions to two Oxford mental hospitals for the period 1953–1956.[6] In a personal communication from Parnell information is also furnished for the period 1957–1960.[7] The studies, indicated in Table 2,

Table 2. First attendances for consultant psychiatric advice, first admissions to hospital, and attempted and actual suicides among Oxford students in 1953–1956 and 1957–1960

	1953	1954	1955	1956
First attendances as outpatients				
Hilary term	11	26	22	24
Trinity term	17	18	18	21
Michaelmas term	10	29	19	22
Total	38	73	59	67
First admissions to hospital	10	20	12	19
Attempted suicide	4	4	0	2
Suicide	4	2	0	1
	1957	1958	1959	1960
First attendances as outpatients	49	54	72	59
First admissions to hospital	13	15	24	13
Attempted suicide	[Figures unavailable for 1957–1960]			
Suicide	1	0	1	3

showed a high incidence of mental ill health among Oxford University students. By the end of 1953 there had been fifteen suicides in seven years, an average of two a year. The University had an average of 5,951 male students in residence during the years 1952–1956, and an average of 7,811 during the years 1957–1960. The minimum known first-admission rate to two of the Oxford mental hospitals was approximately 25 per 10,000; the national rate for people of similar age in 1951 was 11 per 10,000.

[6] Towards Preventing Suicide, *Lancet*, CCLXXII: *No. 6961*, 207–208, 1957.
[7] Feb. 21, 1961.

Most cases of student suicides at Oxford and Cambridge take place during the third term. In many Oxford colleges newly matriculated students are told of this, presumably as a warning and incentive to keep up with their reading. The official attitude is best indicated by a communication issued by Cambridge University. (This attitude is also applicable to Oxford.)

> Council of the Senate of Cambridge University has issued a notice reminding undergraduates of the regulations that nervous breakdowns resulting from, or aggravated by, the imminence of a Tripos examination, and without any physical cause sufficient to account for the symptoms, are not sufficient grounds for giving of an aegrotat degree.[8]

Nervous breakdowns and suicides during Trinity term, when examinations are given, are accepted as not unusual. A medical journal, commenting on this, said, "There is little evidence to suggest that the number of suicides occurring during the term when most of the examinations are held is greater than is to be expected, although in the last ten years [1949–1959] 46 per cent of the suicides have occurred in the Easter term among second year students." [9] University authorities have also attributed the large number of suicides to ". . . some infective aspect of suicide when large numbers of young men [are] living in close relationship." [10] It is taken for granted by all concerned with the problem that the incidence of suicide is and will be higher than at the other British universities because at Oxford (and at Cambridge) it reflects higher standards of entry and final examinations.

In order to determine some of the possible causes of and solutions for the problem of Oxford student suicides, one must look to sources other than Oxford. The general university and medical approach in England is through university student health services available to undergraduate, graduate, and professional students, and offering both medical and counseling service. The idea of a formal operative university health service at Oxford is unpopular and has always met with opposition. Health and counseling services are not part of Oxford's philosophy of education or of its

[8] London *Times*, April 24, 1950, p. 6, col. 2.

[9] R. G. Carpenter, Statistical Analysis of Suicide and Other Mortality Rates of Students, *Brit. J. Prev. Soc. Med.*, XIII: *No. 4*, 173, 1959.

[10] London *Times*, Aug. 29, 1953, p. 4, col. 3.

tradition. A more important reason is to be found in the complete autonomy of each of the Oxford colleges. Congregation, the decision-making body of the University, is composed of the Heads of the colleges, who ensure that no interference occurs. Thus on November 6, 1951, Congregation rejected a proposed scheme for a university health service. "There was undoubtedly a fear that care for the health of undergraduates, which it was rightly thought should rest with the college authorities, might be taken from them and vested in some university official." [11] In 1953 the number of suicides at the University occasioned expressions of concern in the public press and in the House of Commons. The Vice-Chancellor issued a statement that "college tutors who noticed undergraduates looked 'overworked and off colour' would in future be able to send them before a panel of doctors." [12] He added that he did not know when the plan would be put into effect. Seven months later he stated that "the essential problem was how to ensure that every undergraduate on the verge of mental trouble was guided to seek medical advice before it was too late. [But] the University . . . was still passing through a period of financial stringency and . . . had been unable to undertake any but the most necessary expansion." [13] At the present time there is still no operative plan in effect at Oxford. In a personal communication from Parnell the present position of university authorities (including those of Cambridge) toward a student health service is described:

A debate took place in the Oxford University Congregation in October 1951 at which a decision was taken to adjourn *sine die* the discussion on a proposal to have a University Health Service. It is acknowledged that University politics played some part in this decision but it may be noted that the Student Health Service which ran in Cambridge for some ten years is now undergoing modification since the retirement, and later the death of Sir Alan Rook, its first Director. Physical examinations are no longer carried out routinely and chiefly because the number of previously unrecognized but remediable defects discovered did not appear to justify the effort expended. On the other hand a Consultant Psychiatrist has been appointed to the National Health Service in Cambridge who has a special interest in student psychiatric problems. Students with similar

[11] Looking after the Student, *Lancet*, CCLXI: *No. 6690*, 925, 1951.
[12] London *Times*, March 24, 1953, p. 2, col. 5.
[13] London *Times*, Oct. 8, 1953, p. 5, col. 5.

problems at Oxford are usually persuaded by their tutor to seek the advice of a G.P. who may or may not be attached to a College, and are then referred, if necessary for a consultant psychiatrist's advice.

Some sixty students have been referred to this hospital [Warneford Hospital] each year for the last nine years, and of these, twenty on an average are admitted. This represents a minimal proportion because there is nothing to prevent them seeking advice elsewhere either in Oxford or in their home town. I should perhaps add that most colleges claim to take their responsibilities for their students' health seriously and promptly resist any suggestion that they do not. It is perhaps debatable whether they do enough. There is still considerable resistance in the University circles to words beginning with the letters Psy.[14]

The question arises as to why the suicide rate at Oxford (and Cambridge) is higher than at the other British universities. The statistics in Table 1 for 1948–1958 show that all the other universities have larger numbers of women students than either of the ancient universities, and that the suicide rate for women students is quite low. Further study may show this to be relevant. Another difference between the ancient universities and the others is that the former are completely residential and composed of completely autonomous colleges. The provincial universities and London University are primarily commuter universities, and the university, per se, is an entity similar to that in the United States. It may be pertinent that a university composed of somewhat isolated all-male, and a few all-female, communities whose members have been chosen, almost without exception, on the basis of great intellectual ability would be subject to more strains and less means of relief than is the case of universities organized differently. By virtue of the fact that the Oxford colleges are virtually self-contained, this may tend to reduce social intercourse between different colleges, and may also be relevant. The increased student population since 1945 has taxed the residential facilities of all the Oxford colleges. The result is that almost all the colleges require their members to live out for either one-third or two-thirds of their time at Oxford. There is a severe housing shortage in the city, and the "digs" available and financially possible to students are

[14] Jan. 20, 1961.

generally substandard. It has been recognized that there is a connection between housing and suicide. During the periods 1952–1955 and 1958 when the writer was at Oxford, almost all the student suicides were students living in "digs." Dr. T. M. Ling, a psychiatrist who has studied the connection between suicide and housing, has found that loneliness is directly linked with the highest incidence of suicide. He also found suicide to be influenced by the type of housing, and that "suicides . . . occurred to a greater extent in . . . areas where most people lived alone." [15] The living arrangements in almost all the Oxford colleges, as well as in "digs," tend to be Spartan and solitary. Sir Alan Rook also considers housing to have an influence on the suicide rate. "The college staircase may facilitate study but it can also lead to loneliness and encourage brooding." [16]

Another aspect of student suicide is financial pressure. In Oxford, and Cambridge, it is practically impossible to divorce finances and intellectual ability. In the limited literature available, the two are considered together. The *Lancet* has stated that 75 per cent of the students are recipients of education grants, and "the authorities make it clear that in the event of failure the grant will be stopped. . . . Parents realizing their inability to make good if the grant fails, reiterate the slogan. . . . Too much stress is laid on what is, after all, only one aspect of university life." [17]

It is a generally accepted fact that suicide in England is related to social and economic factors, and that intellectuals are more prone to suicide than those in other walks of life. Rook considers it highly probable that the children of highly intellectual and highly ambitious parents form a higher percentage of students at Oxford and Cambridge than elsewhere. It is also true that competition for places is greater at Oxford and Cambridge than elsewhere, and thus the number of intellectuals admitted is greater. Rook feels that this combination of real or fancied parental pressure and highly intellectual individuals may affect the suicide rate. He has raised the question of a relationship between Oxford's

[15] London *Times*, Sept. 2, 1954, p. 3, col. 1.
[16] *Op. cit.*, p. 602.
[17] Editorial, *Lancet*, CCLXI: *No. 6685*, 676, 1951.

severity of selection and higher standards to the suicide rate there, and has stated his belief ". . . that higher standards of entry are more likely to lead to the selection of the mentally unstable." [18]

Accepting Rook's hypothesis of a correlation between Oxford's suicide rate and its supremely high standards for selection and examinations, one would expect a greater percentage of distress and instability there than elsewhere. Parnell's survey on prolonged student illness at Oxford would appear to support Rook. Parnell found that 145 students (113 men, 32 women) missed at least one full term through illness, and mental illness was responsible for 52.5 per cent of the absences. He does not include in these figures "those other forms of serious mental disturbance involving extreme problems of discipline or behaviour, deep anxieties, obsessions . . . which do not entail absence from college." [19] In a similar and corroborative survey, Nicholas Malleson found that 10 per cent of students who start at university do not finish, and that most failures occurred at the end of the first or second year. From this he concluded that "since everyone who comes to university has presumably shown adequate intellectual ability in the entrance examinations, it seems more than probable that distress, as one meets it clinically, is a major element in this failure." [20]

Two of the most anxiety-producing elements of life at Oxford are the instructional method and Schools (final examinations). Attendance at lectures is optional. Instruction, per se, is via the tutorial where the student meets with his tutor to read and discuss his weekly essay. In consequence, the student is alone in his academic studies and endeavors most of the time. He is completely dependent on his tutor's judgment for his academic fate; and this judgment, necessarily in the academic world, is to some extent subjective. Since the University has no authority over the colleges, students have no recourse in cases of injustice. There is no official with whom a student may properly discuss any problem of an academic or personal nature except his tutor or Moral Tutor. There are no tests or term examinations by which a student can judge his progress. At the end of his three or four years at the

[18] *Op. cit.*, p. 602.
[19] Mortality and Prolonged Illness, *Lancet*, CCLX: *No. 6653*, p. 732, 1951.
[20] The Distressed Student, *Lancet*, CCLXVI: *No. 6816*, 825, 1954.

University, depending on the degree for which he is reading, he sits for his degree examinations. "The intellectual freedom . . . of the older universities may foster self-reliance . . . but it may lead to a sense of loss of direction and a feeling of inadequacy." [21] The knowledge that one's future career opportunities are directly linked to getting a First or Second Class Honours degree adds to the strain. Illness, whether organic, functional, or emotional, does not excuse one from taking examinations on the days set by the University. Unless the illness is of the utmost seriousness and is vouched for by expert medical advice as rendering a student completely and permanently unfit to take examinations, he may not supplicate for a degree aegrotat—nor would one be granted. The student, if ill, is invigilated in his sickroom, in college, lodgings, or hospital, on the regularly appointed days for Schools. Invigilators, in full academic garb, striding through corridors to students' rooms is a common sight in all the general and psychiatric hospitals in Oxford. The overwork and strains of Trinity term on those sitting for Schools is very visible. In 1953 at the First World Conference on Medical Education, a paper presented by T. R. Henn, a senior tutor of Cambridge University, referred to overwork for examinations as tending to the use of drugs and spoke of the use of benzedrine as "a sign of fashion among undergraduates." [22] This was equally true of Oxford during the writer's three and one-half years there. The whole complex of pressures is summed up by Malleson in a general statement applicable to both Oxford and Cambridge:

> The syllabus is overloaded. Games and recreational facilities are overloaded. There is a dreadful lack of hostels and halls of residence. Social contact between students and dons is less than it used to be. Interest in religion is waning. The grants system sometimes brings up students unsuited for the university as it is . . . . All these things are important and all take their toll. . . . More and more I come to feel that for many people there must be some element of severe emotional strain implicit in the process of higher education itself.
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> . . . [The university] means a greater or lesser period of celibacy; a greater or lesser period of dependence; and essentially a period of in-

[21] Rook, *op. cit.*, p. 602.
[22] London *Times*, Aug. 28, 1953, p. 4, col. 1.

tensive learning—of in-taking rather than out-putting. It is this . . ., which . . . is the implicit difficulty of the student.[23]

Dr. Graham Grant also mentions, as does Malleson, the relationship between student and teacher as an anxiety-factor.[24] Too often this relationship at Oxford resembles a distorted caricature of the class system. Away from home, working too hard, perhaps lonely, anxious to do well, to keep his grant, many a student becomes anxiety-ridden or depressed. Many students and dons feel that the Oxford code discourages personal communication between don and student; friends may or may not be capable of giving help. There is no university or college agency to which a student can turn. He has three alternatives: try to cope and muddle through as best he can, see a physician, or, as too many do, attempt suicide.

That some source of help for students is necessary has been accepted by all British universities, and implemented by all except Oxford. The provision of personal counseling in British provincial universities is through the universities' health services. One of the most highly developed is that of University College, University of London, where impetus for its establishment was provided by the students in 1945. The Student Health Association is governed by a joint committee of students and staff and is financed partly by the College and partly by a compulsory annual contribution of five shillings per student. The Association runs a health center with medical, dental, and nursing staffs; and the services provided include care for minor illness and injuries, ophthalmic, psychiatric, pathological, dental, and other facilities, radiography, and voluntary periodic physical examinations. The service is open to all professional, postgraduate, and undergraduate students at University College. The physician-in-charge also maintains a general practitioner service for students who wish to register with him.[25] In describing the plan in operation at University College, London, the purpose is to show the importance which English medical

[23] Malleson, *op. cit.*, p. 825.

[24] The Adolescent at College, *Royal Society for the Promotion of Health J.*, LXXVII: *No. 7*, 424, 1957.

[25] Royal College of Physicians Social and Preventive Medicine Committee Progress Report on *Student Health Services* (London: Royal College of Physicians, 1953), p. 4. Quoted by permission of the Royal College of Physicians.

thought places on the co-ordination of counseling-*cum*-psychiatric-service and general medical care within a university health service.

In 1946 the Social and Preventive Medicine Committee of the Royal College of Physicians made six recommendations regarding student health services:

1. Universities should accept greater responsibilities for the health of students.
2. Arrangements should be made for medical examination after entry and periodical examinations during a student's stay at the University, to indicate available means for securing advice or treatment.
3. Arrangements should be made for medical and nursing care of students who are ill.
4. Inspection of lodgings should be undertaken by special officers . . . who should pay attention to the health aspect of all lodgings.
5. Steps should be taken to improve the diet of students.
6. Universities and Colleges should consider the appointment of a medical officer for the general supervision of student health.[26]

A partial explanation for the student mental health situation and mortality rate at Oxford can be found in the committee's statement that "with the exception of Oxford, the general positions in the universities outside London is now broadly in accordance with the above recommendations." [27] The present situation at Oxford, as regards these recommendations, is described in a personal communication to the writer from Parnell.

1. No panel of Doctors has been established by the University.
2. A counsel service sponsored by the Vicar of St. Mary's (the University Church) with one or two helpers operated for a short time but no Doctors were connected with this. I do not believe the number of cases dealt with was more than a handful.
3. At the present time a number of colleges have a college Doctor or Nurse loosely attached to them. The main outcome of Sir Maurice Bowra's meeting [in March 1953] was that the University Authorities were alerted to the problem and possibly a few more students were referred to their college Doctors and through other medical practitioners to the Psychiatrists of the National Health Service. Naturally the memory of that meeting is now fading.

[26] *Ibid.*, p. 3.
[27] *Ibid.*, pp. 3–4.

4. Students coming to Oxford have a routine Chest Xray. There is no University requirement for a physical examination and no formal University Health Service.

5. Student suicides continue to occur from time to time and as far as I can see, with the present arrangements, are likely to do so.[28]

Wherever a student health service has been established at a British university the need for student counseling has been recognized and included as part of the health service. This fact, together with the strikingly lower incidence of suicide, would appear to the writer to point to a connection between Oxford's high student suicide rate and its lack of a health service.

In 1952, on the initiative of the Institute of Psychiatry in London, an attempt was made to discover the prevalence of nervous troubles among undergraduates, to determine who would come for psychiatric advice and for what kind of problem. A clinical approach was decided on, and an experimental and free service was established for students of the London School of Economics. From January 24, 1952, to June 30, 1953, 131 students out of a total of 1,743 presented themselves. The ages of the students ranged between eighteen and forty years, and the average age was twenty-four and one-half years. The cases were divided into three diagnostic categories: severe cases, moderate cases, and mild cases. The conditions within each category are listed in Table 3.[29] After the initial eighteen months experience, it was concluded:

A service of this kind at a school or university has great advantages; teachers and administrators find it helpful to have a closer contact with a psychiatrist in case of need; and there is no doubt that students are prepared to seek advice when they feel themselves to be emotionally disturbed. As they have the insight to seek help and the ability to use it when it is provided, a psychiatric service for students appears to meet a real need and deserves to become an integral part of a university school. It is justified by the immediate gain for certain students and the probable good effect on their future well-being.[30]

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[28] Jan. 17, 1961.

[29] J. C. Read, The Mental Health of Undergraduates in England, *Lancet*, CCLXVI: *No. 6816*, 822, 1954.

[30] *Ibid.*, p. 823.

Table 3. One hundred thirty-one cases of nervous troubles among students at the London School of Economics classified as to diagnosis and severity

Severe cases	
Affective breakdown	3
Mixed depression and anxiety	3
Acute anxiety attacks	3
Chronic anxiety state	3
Anxiety with disorder of physical function	2
Mixed anxiety and obsessional state	1
Obsessional state	3
Hypochondriasis	1
Conversion hysteria	1
Personality disturbances with marked social consequences	7
Total	27
Moderate cases	
Depression	2
Anxiety state	3
Anxiety with disorder of physical function	6
Emotional outbursts	2
Hypochondriasis	2
Asthma and dermatitis	1
Paranoid state	2
Obsessional state	3
Speech difficulties	2
Personality disturbances (inferiority feelings, study difficulties, etc.)	12
Marital and other family problems	4
Psychosexual difficulties	5
Total	44
Mild cases	
Depression	4
Anxiety state	8
Emotional outbursts	3
Obsessional state	2
Hypochondriasis	2
Physical symptoms of functional origin	5
Personality disturbances (inferiority feelings, study difficulties, etc.)	17
Marital and family problems	7
Psychosexual difficulties	9
Other problems	3
Total	60

The cases seen would indicate the magnitude of students' problems in a university, and the need for a comprehensive university health service. The lack of such a student health service at Oxford complicates the students' problems when they do seek help. Not only must a student go outside the University setting but a financial and psychological problem is added. Since the services of a psychiatrist or a psychologist are expensive if the student goes directly, private care is beyond the means of most students. They must, therefore, obtain a physician's referral for psychiatric outpatient care, or inpatient care in a psychiatric hospital under the National Health Service. To take such an extreme measure in order to obtain help is more than most students can face, particularly if they are embarrassed or have too much pride to force themselves to see a doctor in a psychiatric hospital setting. In the writer's opinion just the knowledge that there is professional medical and psychiatric help available through and within the university setting can be of inestimable psychological value to a student; it can be of even greater value in helping him overcome his fears or his unwillingness and resistance to seeking such help as he may need. It is the lack of such a service, the absence of competent, kind, and friendly university professional people to whom a student knows he is free to turn to for help, advice, and reassurance that constitutes a most serious defect within Oxford University. To many students the lack of such a university service has been disastrous.

In simple, human terms the service actually rendered by a university health service physician, and the English view of a university physician's function, is best described by Malleson:

> A full medical examination must be undertaken. . . . This full knowledge of the patient, and the personal rapport that is made in getting it, is the basis of effective help.
>
> The simplest help one can give is by medication. A little sedation with the ordinary barbiturates is a relief to most unhappy people.
>
> Advice is next in the clinical armamentarium. Simple study advice is often needed. Many students, particularly anxious students, overwork themselves greatly. . . . Simple physiological advice . . . may be valuable. . . . Sometimes a little . . . advice about a love affair . . . works wonders. Sometimes financial problems have to be discussed. . . . Sometimes loneli-

ness or homesickness can be countered. . . . All these things, many of them in essence hardly medical at all, have a prominent place in the treatment of student distress. . . .

Support, by which I mean simply keeping in touch, seeing the patient again in a week or a fortnight, is also an essential part of treatment. . . . It is essential to impress upon the student that you are pleased to see him and not bothered by him. Not to have to carry one's problem quite alone lightens it a lot, and many a student will be helped by being able to see one repeatedly, even . . . if only to gossip.[31]

It is the writer's opinion that another important cause that contributes to the high student suicide rate at Oxford is the very cause of Oxford's charm and glory, its excessive individuality. Affectionately known to all old Oxonians as "the home of lost causes," Oxford can also become the home of "lost" people. The air of detachment; the vast gulf that separates dons and students; the customary tendency to limit social intercourse mainly to members of one's own college; the attitude that regards emotional problems as matters not to be discussed; the very high academic standards and the various pressures they entail; and the tutorial system which leaves a student completely and literally "on his own" in the process of learning and study—all these things contribute emotional and mental tensions to the natural and expected academic strains. When the resources of repression, sex, liquor, and the accepted forms of student violence are exhausted, there are no others. A university health service is not considered a proper nor acceptable resource by Congregation at Oxford. The student remains basically alone with his problems—alone to find his own solution, regardless of the outcome.

Nobody knows where, how, or why the student comes unstuck. The university . . . is a productive machine. . . . It is not sacrosanct, it was made by man, not sent by God. A very small part of the cost of the failures would support a full-scale study of the university, its students, and their mutual impact. Then, but only then, we could all make sensible suggestions.[32]

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[31] *Op. cit.*, pp. 824–825.
[32] *Ibid.*, p. 825.

A comprehensive, well-functioning health service, which includes psychiatric services, freely available to all students may not be the complete answer to the problems of Oxford. One is led to believe, however, that the inclusion in, or exclusion from, the university of complete medical and psychiatric and counseling services is relevant to the total health and well-being of the students.

Mental Health Services in College: Some Statistical Analyses*

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MENTAL health services at Cornell University have been an integral part of the student medical services for many years. In recent years mental health services have been supplied to students through the multidisciplinary approach. The nature and function of this approach has been described and published elsewhere.[1] At present the team consists of one psychiatrist, two psychiatric social workers, and two clinical psychologists. This approach continues to be acceptable and helpful at Cornell University.

One major function of this limited staff is to handle all kinds of psychiatric crises and emergencies that come to their attention. Some preventive work is undertaken, and a fair amount of reconstructive psychotherapy is offered. An increase in staff would

* This project has been a co-operative one including all members of the Mental Health Division of the Gannett Medical Clinic, Ithaca, New York. In addition to the authors, who have played varying roles in the project, the help of the following should be acknowledged: Marvin Waldman, Ph.D., clinical psychologist, Misses Audrey Gallon and Frances McCormick, psychiatric social workers, and Miss Marian Munsey, secretary. Norman S. Moore, M.D., clinical director of the Cornell Infirmary and Clinic, has secured some financial support of the project for the coding and processing of the data. John Summerskill, Ph.D., has made several suggestions toward improving the manuscript.

[1] C. D. Darling, The Multidisciplinary Approach to the Solution of Student Mental Health Problems, *Ment. Hyg., 41:* 170–177, 1957.

enable our program to be broadened so that present unmet campus needs could be served.

In this paper the authors will present the results of some statistical analyses regarding one year's work (1959–1960.) The *research hypotheses* which were tested are as follows. There are statistically significant over-all relationships between the *sociological position* of college students and (1) becoming a patient in the Mental Health Division, (2) significant psychopathology as measured by the Minnesota Multiphasic Personality Inventory (the MMPI), and (3) type of psychopathology as measured by this same instrument.

A student's sociological position is his place within the college structure as shown by the sum total of characteristics such as his sex, college year, type of residence, and academic standing. In this project the sociological position is the *independent* variable, while becoming a mental health patient, significant psychopathology, and type of psychopathology are the *dependent* variables. If we secure data regarding the sociological position of our patients, we predict that certain characteristics of this position will be associated with the dependent variables. For example, we may find that college year is significantly associated with the likelihood of becoming a mental health patient.

To avoid misunderstanding it should be made clear that when we present results regarding the relationship between sociological position and psychopathology we mean in this paper *psychopathology as measured by the MMPI.* Therefore, our results are only of importance to the extent that this instrument is a valid index of psychopathology. In the Mental Health Division we use the MMPI fairly routinely, and we have found this personality test to have a respectable validity when compared to clinical judgment. On the other hand, it is true that at times the MMPI produces "false" negatives and positives. Hathaway and McKinley, who developed this instrument, summed up their experience as follows in 1951: "As for validity, a high score on a scale has been found to predict positively the corresponding final clinical diagnosis or estimate in more than 60 per cent of new psychiatric admissions." [2]

The reader who wishes to become more familiar with this test

[2] S. R. Hathaway and J. C. McKinley, *Minnesota Multiphasic Personality Inventory Manual* (rev. ed.; New York: Psychol. Corp., 1951), p. 6.

is referred to a volume published in 1956 by Welsh and Dahlstrom with a bibliography of 689 items.[3]

This paper does not include preliminary or final diagnoses, types of psychotherapy carried out, follow-up procedures, or criteria for length of treatment or for referral of patients elsewhere.

DESIGN AND PROCEDURES

The data necessary to test our hypotheses can be obtained only with certain clerical procedures designed to collect information about the variables we are interested in. The data which have been analyzed in this project were derived from three sources: (*a*) a routine information sheet filled out by the student upon admission, covering the variables sex, age, date of contact, referral source, residence, marital status, college, academic status, college year, academic standing, part-time work, and nationality; (*b*) a card filled out by the secretary, showing the staff who have seen the patient, date of appointment, number of interviews, and religion; and (*c*) the MMPI recording sheet showing significant psychopathology as well as type of psychopathology. The MMPI essentially shows a profile of psychopathology rather than yielding one specific diagnostic formulation, such as hysteria or schizophrenia.

Because of the magnitude of the statistical work involved in this study, it was decided to make use of modern electronic computers and IBM punch cards. Therefore, all our data had to be coded into a numbers system. We ended up with nineteen variables using forty-two columns of the IBM cards. The actual coding was done by hired clerical help.

The code numbers for each variable for all our patients were then punched on the cards and processed at the Cornell Computing Center. The more complex cross tabulations were done by one of the authors [4] with technical consultation by the Center.

The actual statistical analyses were then performed. Whenever possible, statistical significance tests were run to check on the in-

[3] G. S. Welsh and W. G. Dahlstrom, eds., *Basic Readings on the MMPI in Psychology and Medicine* (Minneapolis: Univ. of Minnesota Press, 1956).

[4] Dr. Braaten.

terpretations of these results. The logic of this significance testing is to be able to accept or reject the so-called null hypothesis that there is no relationship between a certain pair of variables. The interested reader is referred to a recent textbook on nonparametric statistics.[5]

PATIENT POPULATION

The patient population consists of all regularly registered students who came for evaluation and treatment in the Mental Health Division during the time July 1, 1959, to June 30, 1960. The total number of mental health patients was 639. Ten additional cases were excluded from this study since those patients were either students registered for the summer session only or persons who were married to students but not active in college themselves.

Approximately 20 per cent of the 639 cases did not have data on the variables as routinely recorded. This information was, however, obtained by the staff by rereading the interview notes in the clinical folders. Therefore, there is complete data for the total mental health patient population on all but two of the MMPI variables.

For 407 cases, that is 63.7 per cent, we had data on the MMPI. Those cases without data on the personality test were mostly students who were invited to come in for a so-called "health interview," [6] also foreign students with a language handicap and a few students who were so sick that personality testing was inappropriate or impossible. This gives us a somewhat biased sample. The direction of the bias is probably toward more, rather than less, significant psychopathology. The reason for this is that only a few of the students with "health interviews" turn out to become real patients. Therefore, the results regarding psychopathology as measured by the MMPI should be representative of our actual patient population.

Of the 407 cases with MMPI data, 98 yielded one or more

[5] S. Siegel, *Nonparametric Statistics for the Behavioral Sciences* (New York: McGraw-Hill, 1956).

[6] A "health interview" is a diagnostic screening interview performed by the psychiatric social workers based upon the students' answers to certain questions on their medical history charts indicating possible emotional disorder.

scores on the *L*, *F*, and *K* scales, throwing doubt on the validity of the profiles, and were consequently excluded from our analyses. This finally left us with 258 cases with significant and valid MMPI profiles and 52 which were not significant, yielding a total of 310 cases for our analyses of psychopathology in relation to certain variables. A significant score on the MMPI is defined as a *T*-score of 70 or higher. This theoretically means that in a random college population only two or three students out of 100 would yield such a deviant MMPI profile.

RESULTS

The results of our statistical analyses will be stated here in summary form; the tables with data on the chi-square one-sample significance tests will not be included.[7] When the expression *very significant* is used, it implies that a certain difference is significant at the .001 level or better. If a difference is described as *significant*, it means that the difference is significant at least at the .05 level, but not at the .001 level or better. While we shall keep strictly to our findings under the heading *results*, we shall endeavor to discuss some of the more significant results afterwards. To facilitate cross references the results below are numbered.

Sources of Patients

1. At our division we see 70 per cent males and 30 per cent females. The females are very significantly overrepresented in our sample.

2. The great majority (63 per cent) of our patients are, as we would expect, between eighteen and twenty-one years of age; 9 per cent are seventeen years or younger while 28 per cent are twenty-two years or older.

3. The biggest referral source nowadays is the student patients themselves, accounting for almost one fourth (24 per cent) of all our patients. One fifth, or 133 students, are invited to come in for so-called "health interviews." Our own medical doctors recruit 15 per cent of the mental health patients. The other sources are

[7] Upon request the authors will be glad to send this material in mimeographed form to the interested reader.

in rank order from highest to lowest: administrative and dormitory personnel, student friends of the patients, faculty, others, the proctor's office, the new educational-vocational guidance office, and Cornell United Religious Work. Altogether 639 patients were included in our sample.

4. Almost half (47 per cent) of our patients live in dormitories. One fifth (19 per cent) live in rooms, and almost as many (18 per cent) live in apartments. A little more than 10 per cent (12 per cent) of the patients are members of fraternities and sororities. The rest, some 6 per cent, live in their own homes, in co-operatives, or in other lodgings.

A statistical checking shows that college residence is a very significant "recruitment" factor for our patients. Those who live in dormitories and rooms are definitely overrepresented, while students in apartments and fraternities are clearly underrepresented.

5. Close to 10 per cent (9 per cent) of our patients are married students. Upon detailed analysis it is revealed, however, that married students as a group are very significantly underrepresented among our patients.

6. The overwhelming majority of our patients (78 per cent) naturally come from the three biggest schools on campus, Arts and Sciences, Agriculture, and Engineering. The next four in rank order are from highest to lowest: Home Economics, Hotel Administration, Architecture, and Industrial and Labor Relations. In addition, we see a few students from Law, Veterinary Medicine, Business and Public Administration, Education, the Unclassified Division, and Nutrition.

It is clear that Arts and Sciences, Agriculture, and Education are overrepresented while Engineering, Home Economics, and Veterinary Medicine are coming in fewer numbers than we would expect on a chance basis.

7. Almost one fourth (24 per cent) of the patients we see are graduate students. Although they tend to be somewhat overrepresented, this difference turns out not to be statistically significant.

8. Forty per cent of our patients are freshmen. As one might expect, they tend to be very significantly overrepresented in our sample.

9. Contrary to what many people expect, only one fourth (24 per cent) of our patients are in serious academic trouble, that is those with a cumulative academic average of 70 or below. Therefore, the majority of our mental health patients are good or very good students. One fourth of them score 81 or above.

It is true, however, that students in serious academic trouble are overrepresented in our sample. Some of these students are "underachievers" and can be helped toward academic improvement through counseling and psychotherapy.

10. The great majority of mental health patients (77 per cent) have no part-time work, while the rest of the students in the study carry some hours of work each week. Because we do not know the situation for the student population as a whole, we have not been able to find out whether this is a significant "recruitment" factor or not.

11. Ten per cent of our patients are foreign students. They are definitely overrepresented in our division, although this significance is not as striking as those reported above.

12. As for religion, a little less than half of our patients (46 per cent) are Protestants, while 27 per cent are Jewish and 13 per cent are Catholic. Eleven per cent gave no preference, and only 3 per cent have some other religion.

Again a statistical analysis shows that religion also is a significant "recruitment" factor for patients in the Mental Health Division. The Jewish students and those with no preference are overrepresented, while the other denominations are underrepresented. This significance is not, however, as marked as most of the others previously cited.

Significant Psychopathology and Certain Variables

13. In conclusion 1 it was established that females are very significantly overrepresented in our sample. But the females seem to be showing 15 per cent less significant psychopathology than the male students as measured by the MMPI, although this difference turns out not to be statistically significant.

14. The age of our patients turns out not to be a factor which is associated with significant psychopathology.

15. Neither is referral source related significantly to psychopathology.

16. Although there are some fluctuations in significant psychopathology as related to referral source, these differences are not statistically valid.

17. Whether a patient is married or not has no positive relationship with significant psychopathology.

18. Again no positive relationship was established between college and significant psychopathology.

19. Academic status and significant psychopathology were unrelated.

20. No consistent relationship was found between college year and significant psychopathology.

21. Neither were academic status and significant psychopathology positively associated.

22. There was no relationship between part-time work and significant psychopathology.

23. Religion and significant psychopathology were unrelated.

Type of Psychopathology and Certain Variables

24. For all the patients who were given the MMPI, almost 65 per cent of the total, *depression* was beyond any doubt the most frequent presenting symptom for this group. One fourth of our patients show depression as their primary presenting symptom.

In rank order the following most prominent presenting symptoms were: psychasthenia, problems regarding sexual identification, hysteria, schizophrenia, and psychopathic deviation.

The presenting symptoms which occurred with the least frequency were: hypochondriasis, paranoia, social introversion, and hypomania.

25. As the most prominent secondary symptom psychasthenia received the highest rank. Other symptoms which were, comparatively speaking, more frequent as the secondary complaint were: hysteria, schizophrenia, psychopathic deviation, and hypochondriasis.

26. As it would be partly clear from the preceding results, the most frequent combinations of the two most prominent symptoms

were: depression and psychasthenia, psychasthenia and depression, depression and schizophrenia, psychasthenia and schizophrenia, psychasthenia and hysteria, schizophrenia and psychasthenia, depression and problems regarding sexual identification, problems of sexual identification and depression.

27. If we consider only the significant and valid MMPI scores, again depression is the most prominent symptom, with psychasthenia following next. Schizophrenia rather than problems regarding sexual identification is number three in this survey. But on the whole the rank order is pretty much the same as mentioned under paragraph 24.

28. A statistical analysis shows that there is, in general, a very significant positive relationship between sex and type of psychopathology as measured by the MMPI.

Women tend to display more hysteria and more psychopathic deviation than men. Also women appear to be more paranoid than men. No men have as their highest peak on the MMPI the paranoia score, although according to chance some men would be expected to. Clearly, more women than would be expected have such a significant score.

On the other hand, men are slightly overrepresented in relation to depression, psychasthenia, and schizophrenia. Men are also more significantly involved with problems of sexual identification than women, but this result must be interpreted with caution because of the nature of this particular scale of the instrument.

Most of the basis for the over-all significance of the relationship between sex and type of psychopathology is found among the women.

29. The over-all conclusion about age and type of psychopathology is that there was no significant relationship.

There were some specific, but not significant, indications, however. The incidence of depression was thus highest among students twenty-two to twenty-five years of age. There seemed to be a steady increase in the incidence of psychasthenia with age. Finally, hypomania had clearly its greatest incidence among students from eighteen to twenty-one years of age. Most other symptoms were fairly randomly distributed according to age.

30. Because of the relatively small number of married students who had taken the MMPI, no valid comparison could be made between single and married students as related to type of psychopathology.

31. Academic status and type of psychopathology were not, in general, significantly related.

The findings mentioned under paragraph 29 were partly substantiated, however. Thus, the incidence of depression is definitely higher among graduate students than among undergraduate students. Also, hypomania clearly showed up more frequently among our undergraduate patients.

32. With one exception the number of interviews for cases turned out not to be significantly associated with type of psychopathology.

Thus, case length is no guide in predicting the clinical picture. The syndrome of hysteria illustrates this statement. Twelve per cent of the cases with hysteria as the predominant syndrome were seen 1 to 3 interviews, 6 per cent with this same syndrome were seen 4 to 6 interviews, another 6 per cent were seen 7 to 9 interviews, and finally 11 per cent were seen 10 interviews or more.

The only exception to this picture of random occurrence was psychopathic deviation. The incidence of this particular clinical picture increases with case length from 6 per cent to 18 per cent. Another way of describing this is to observe that among the cases carried only 1 to 3 interviews psychopathic deviation ranks number seven in incidence, while this syndrome has moved up to second place for cases carried 10 interviews or more.

33. The general finding about religion and type of psychopathology is that there is no significant relationship observed. Religion as a variable cannot be used to predict psychopathology.

There are, however, a few trends which are worth observing. Depression is most predominant among Protestants, least predominant among patients with no preference for religion. Jewish patients are overrepresented in regard to psychopathic deviation while Protestants are underrepresented. Patients with no preference for religion have proportionately more problems in the area of sexual identification while Protestants are less concerned about this area of complaints. In regard to psychasthenia, Jewish patients are clearly underrepresented while patients of other religions are

all more or less overrepresented. It should again be emphasized that these are just trends, and that no significant over-all relationship was established.

DISCUSSION

General Findings

The general summary of our results as related to the stated hypotheses is as follows.

Hypothesis 1 is, on the whole, definitely confirmed by our findings. There is indeed a striking positive relationship between the sociological position of students and the likelihood of becoming a patient at the Mental Health Division. In other words, students are becoming mental health patients on a selective rather than on a random basis.

The description of a student with the *highest vulnerability* is a female student in her freshman year who lives in a dormitory or room, in Arts and Sciences, Agriculture, or Education, with an academic average of 70 or below, a foreigner, with Jewish religion or no preference for religion. The description of a student with the *lowest vulnerability* is a male student, upperclassman, who is a fraternity member or married, living in an apartment, in Engineering, or Veterinary Medicine, with an academic average of 71 or higher, a U.S. citizen, of Protestant, Catholic, or other religion.

Hypothesis 2 is definitely not confirmed by our findings. There is no significant relationship between the sociological position of students and significant psychopathology as measured by the MMPI.

This negative conclusion can be illustrated by the findings regarding referral source and psychopathology. It was thought that the more competent the referral source the higher the proportion of significant psychopathology would be. In general this relationship was not established. The impression of the findings is that there is remarkably little variation between the referral sources. Of the self-referred patients 81 per cent of the tests were significant. Of those referred by our medical doctors 80 per cent were significant. Of students referred by administrative and dormitory personnel, 89 per cent of the tests were significant. Therefore, on

the basis of these results, there is no justification for deeming certain referral sources good or poor. The average proportion of significant referrals is as high as 84 per cent.

Similar analyses could be presented for the other variables in relation to significant psychopathology, such as sex, age, residence, and college. They would all show the trend illustrated above.

Hypothesis 3 is partially confirmed by our findings. Thus, there is a very significant relationship between some characteristics of the sociological position of college students and type of psychopathology as measured by the MMPI.

There are marked sex differences as to the frequency of significant and valid highest peaks on the MMPI. Women show more hysteria, psychopathic deviation, and paranoia than men as these syndromes are measured by this instrument. These are differences in relative terms. In addition, the results should be evaluated against the absolute numbers upon which they are based.

Let us illustrate this point with the finding about paranoia. First, it should be recalled as mentioned under paragraph 24 that after hypochondriasis, paranoia is the least frequent peak on the MMPI for our students. Therefore, it is no surprise that the number of cases upon which this difference is based is very small, in fact only seven females with a significant score and no males. But a further check reveals that the established difference is corroborated if we consider all fifty of our patients with significant and valid paranoia scores, whether the score is the highest or not. Therefore, although the number is small, the positive result may still be quite important.

Men are somewhat overrepresented in relation to depression, psychasthenia, and schizophrenia.

The overall finding is that there is no significant relationship between religion and type of psychopathology. But this over-all result conceals some rather interesting and significant trends which are found in relation to certain scales.

Some Specific Findings

We shall now proceed to discuss some specific findings. Attempts will be made to suggest what hypotheses will best explain our results. This discussion will be selective rather than compre-

hensive because the authors did not find it feasible to comment on certain results regarding psychodynamics and on religion and psychopathology.

More females than males seek our mental health services. One hypothesis would be that co-eds are more emotionally disturbed than male students. One implication of this idea would be that the female students would show more significant psychopathology than the opposite sex. Our data do not support this view. On the contrary, the girls show 15 per cent less psychopathology as measured by the MMPI, but the difference is not significant.

The most plausible hypothesis to account for the overrepresentation of females is that the *threshold for referrals* is lower than for males. In other words, with the same amount of actual psychopathology the girls will seek help more readily than the boys. Partly they react this way themselves; partly they are more thoroughly supervised and referred by others, such as head residents and dormitory counselors. In our culture it is possible that girls are given more sanction than boys to acknowledge emotional problems.

Fewer married students than single students come in for mental health consultation. We have no basis in our data, however, for saying that married students show less psychopathology when they do come in. Admittedly we do see a number of married students in more or less serious emotional trouble. But it is possible that a married student gains some "therapeutic" support and understanding from the spouse which accounts for this finding. Another possible explanation is that those students who get married in the first place are individuals who can better work through their emotional problems with somebody of the opposite sex.

Arts and Sciences are overrepresented among our mental health patients, together with students from Agriculture and Education, while students from Engineering, Home Economics, and Veterinary Medicine are underrepresented. As previously stated, it was established that there is no significant relationship between sociological position and significant psychopathology. More specifically, it was found that colleges did not differ as to significant psychopathology as measured by the MMPI. This certainly holds true for the colleges just mentioned when the two groups are compared. There-

fore, we have no evidence for saying that students from one college are more emotionally disturbed than boys and girls from some other college.

A more reasonable explanation is perhaps again that the threshold for referrals is lower in Arts and Sciences than in, let us say, Engineering. The reason why the threshold is lower in Arts and Sciences, if this hypothesis is correct, is perhaps related to differences in subject matter. It is our clinical impression that Engineering students on the average are less aware of human psychodynamics than Arts students.

More freshmen become mental health patients than any other age group on campus. The major reason for this overrepresentation in our division is that freshmen are invited to come in for so-called "health interviews." From our data we have no way of knowing what proportion of the freshmen would come in for consultation if they were not invited for health interviews. Therefore, the results of this study do not support the notion that freshmen actually are more emotionally disturbed than older students.

Foreign students are overrepresented among our mental health patients in proportion to the actual number of non-American students on campus. This finding is the more remarkable since we have a special Foreign Student Office at Cornell University. Presumably, these foreign students are also picked rather carefully as to academic potential and health. In spite of these factors foreign students have relatively more emotional problems than their American fellow students.

It is our clinical impression that many of the emotional problems of foreign students are situational rather than difficulties in their personality structure. Foreign students have certain unique problems which make college life in America a rather stressful situation. Except for English-speaking foreign students most of them have a significant language handicap. Also they have to learn a new culture at the same time as they study. Finally, there are often striking differences in the educational system in America compared with their own which imply rather extensive readjustments.

On the other hand, part of this overrepresentation is probably

also related to an imperfect selection system prior to coming to America. We admittedly see some foreign students with rather serious and long-standing psychopathology.

More Jewish students and of no religious preference students were seen at the Mental Health Division than students belonging to other religions. Again we have no results supporting the theory that, in general, significant psychopathology is associated with religion.

Neither is there any support for the notion that Jewish students come in more often because they are a religious minority at Cornell. If that hypothesis was correct, we could expect Catholic students to be overrepresented, since there are only half as many Catholic students at Cornell as Jewish students.

We believe that Jewish students come in more often because they are more accepting of the notion of getting help through counseling and psychotherapy. Jewish psychotherapists have notoriously been pioneers in this field.

Students with no stated preference for religion also tend to be overrepresented compared with Catholics and Protestants. Most college students tend to question values and religious beliefs when they are exposed to such large differences among their fellow students. But students indicating no religious preference seem to come in more for evaluation and treatment about these and other emotional conflicts. Not infrequently their rejection of religion is coupled with an antagonistic attitude toward parental authority.

Depression is the most common emotional problem as measured by the MMPI. What we are dealing with here is symptomatic depression, which may cover up several quite different psychodiagnoses, such as situational depression, reactive depression with psychoneurosis, true psychotic depression, or depression related to schizophrenia. Farnsworth says: "Almost all the writers in this field thus far have emphasized the importance of depressions and suicide in the work of psychiatrists with students. Marked depression of mood has been and is very common among students and may lead to irreversible action unless protective measures are taken." [8]

Freshmen are more hypomanic, older students more depressed. Hathaway

[8] D. L. Farnsworth, *Mental Health in College and University* (Cambridge, Mass.: Harvard Univ. Press, 1957), p. 24.

and McKinley explain that hypomanic patients show "marked overproductivity in thought and action." [9] It seems possible that this tendency is released at least partly through the great freedom students have upon coming to college. Often coming to college is the first time these young people are away from the discipline of the home. But admittedly it is difficult to differentiate between hypomanic patients and individuals who are merely ambitious, vigorous, and full of plans.

As the students move ahead in college they perhaps realize that some of their plans are unrealistic and cannot be carried out. Most students learn to accept their limits in talents and energies, but some students become depressed when they are faced with their own shortcomings, either fancied or real.

These trends were the only ones which were correlated with age in college.

Psychopathic personalities need longer attention in the treatment situation. This syndrome was the only one which showed a consistent relationship with case length. The longer the case was, the more predominant were the psychopathic tendencies. Among cases carried only two to three times, psychopathic deviation ranked number seven in incidence, while this syndrome has moved up to second place for cases carried ten interviews or more.

Hathaway and McKinley point out that the main difficulty in those with psychopathic personality lies in "their absence of deep emotional response, their inability to profit from experience, and their disregard for social mores." [10] These people are difficult to help in psychotherapy. Since this syndrome is rather predominant in longer cases, it certainly deserves further study in relation to the mentioned difficulty. Our clinical experience seems to indicate that psychopathic tendencies are not so ingrained at the college level that they are beyond effective help through counseling and psychotherapy.

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[9] *Op. cit.*, p. 21.
[10] *Ibid.*, p. 19.

SUMMARY AND CONCLUSIONS

The purpose of this paper is to report on some statistical analyses of mental health services in college. The research hypotheses which were tested are as follows: There are statistically significant over-all relationships between the sociological position of college students and (1) becoming a patient in the Mental Health Division, (2) significant psychopathology as measured by the Minnesota Multiphasic Personality Inventory, and (3) type of psychopathology as measured by this same instrument.

The data which have been analyzed in this project were derived from a routine information sheet filled out by the student upon admission, a card filled out by our secretary, and the MMPI recording sheet. Because of the magnitude of the statistical work involved, the data were coded and processed by IBM punch cards.

The patient population consisted of all regularly registered students who came for evaluation and treatment at the Mental Health Division during the time of July 1, 1959, and June 30, 1960. The total number of these mental health patients was 639. Of the 407 cases with MMPI data, 258 cases yielded both significant and valid scores.

Hypothesis 1 is, on the whole, definitely confirmed by our findings. There is indeed a striking positive relationship between the sociological position of students and the likelihood of becoming a patient at the Mental Health Division. In other words, students become mental health patients on a selective rather than on a random basis.

Hypothesis 2 is definitely not confirmed by our findings. There is no significant relationship between the sociological position of students and significant psychopathology as measured by the MMPI.

Hypothesis 3 is partially confirmed by our findings. Thus, there is a very significant relationship between some characteristics of the sociological position of college students and type of psychopathology as measured by the MMPI.

More specifically the following positive findings emerge from this research project:

1. More females than males seek our mental health services in relation to the actual proportion of males and females in the University.

2. Fewer married students than single students come in for mental health consultation.

3. The College of Arts and Sciences is overrepresented among our mental health patients, together with students from Agriculture and Education, while students from Engineering, Home Economics, and Veterinary Medicine are underrepresented.

4. More freshmen become mental health patients than students from any other class on campus.

5. Foreign students are overrepresented among our mental health patients in proportion to the actual number of non-American students on campus.

6. More Jewish students and students of no religious preference were seen at the Mental Health Division than students belonging to other religious faiths.

7. Depression, as measured by the MMPI, is the most common emotional problem among our mental health patients.

8. Women patients show more hysteria than men as measured by the MMPI.

9. Female patients display more psychopathic deviation than the opposite sex.

10. Female patients are more paranoid than patients of the other sex.

11. Freshmen patients are more hypomanic, while older patients are more depressed.

12. Psychopathic personalities need longer attention in the treatment situation.

13. Protestant patients are more depressed than students of other denominations.

14. Jewish patients display more psychopathic deviation than other religious groups.

15. Jewish patients are less psychasthenic than their fellow students within other denominations.

16. Patients with no religious preference have more difficulties with their sexual identification than student patients who profess to some religion or other.

A selection of these results were critically discussed. The basis for this evaluation was partly clinical experience and partly pertinent results from the research literature.

Many ideas for further research emerged from this research project. While the present project was a rather large-scale statistical project, several new studies will be more focused and intensive.

Failure of Chloroquine Phosphate in the Treatment of Infectious Mononucleosis

WILLARD DALRYMPLE, M.D.,* and ANDREW W. CONTRATTO, M.D.,† HARVARD UNIVERSITY

IN May 1960, Gothberg reported the cases of four patients with severe infectious mononucleosis who showed "a peculiar symptomatic response to the administration of chloroquine phosphate" (Aralen).[1] Each of his four cases showed rapid defervescence with absence of fever and marked subjective improvement within thirty-six hours. In one, an associated pharyngitis also improved rapidly. Gothberg used the antimalarial drug in the same dosage usually given for treatment of acute malarial attacks: 1.5 grams in the first day, and 0.5 grams daily thereafter.

Since that time, we have treated six consecutive febrile patients ill with infectious mononucleosis by means of similar doses of chloroquine phosphate. These patients have not shown the dramatic response which Gothberg's patients showed. Only one of our six became afebrile within forty-eight hours, and his pharyngitis took a longer period to subside.

It is always perplexing to know how many cases to investigate before publishing a report which says "No"; presumably the number is no more than a report which says "Yes." We believe that

* Dr. Dalrymple is presently at Princeton University.
† Deceased, February 21, 1961.

[1] L. A. Gothberg, Severe Infectious Mononucleosis Treated with Chloroquine Phosphate, *J.A.M.A.*, *173:* 53–57, 1960.

these six cases indicate it to be unlikely that infectious mononucleosis is influenced by chloroquine phosphate and are therefore reporting them now.

CASE REPORTS

Case 1

A twenty-five-year-old student, married a month previously, entered the Stillman Infirmary of Harvard University on October 6, 1960, with the chief complaint of "a cold" for two weeks. He had noted sore throat and malaise during this time. Four days prior to entry he had noted cervical adenopathy, fever as high as 102° F., and headache. Physical examination showed an acutely ill, basically healthy young man with a temperature of 100° F. His throat was erythematous and slightly edematous. He had large, slightly tender cervical lymph nodes; the spleen was not felt on admission, but became palpable two days later. In other respects, his examination was normal.

His laboratory data showed the typical changes of infectious mononucleosis, with a maximum lymphocytosis of 72 per cent and heterophile agglutination (unabsorbed) positive in a dilution of 1:1280 at its maximum.

On the third infirmary day, without previous treatment of any sort, he received 2.0 grams of chloroquine phosphate in divided doses, 1.0 gram the following day, and 0.5 grams on each of the succeeding days. At the end of this time he was better, and was discharged to the care of his wife; but his improvement was gradual rather than rapid, and on the second day of treatment the temperature reached a higher mark than on the first day.

Case 2

A twenty-three-year-old single student entered Stillman Infirmary October 14, 1960, with the chief complaint of fever intermittently for two weeks. He had also noted cervical adenopathy and had felt malaise; sore throat had not been present. On physical examination, he was a basically healthy, acutely ill young man with a temperature of 100.8° F. He had 1.0 cm. cervical and

axillary lymph nodes, and the spleen tip was palpable. The throat appeared normal.

His heterophile agglutination (unabsorbed) was positive to a maximum dilution of 1:640, and his maximum lymphocytosis was 72 per cent.

He received 2.0 grams of chloroquine phosphate in divided doses on his second and third hospital days, and 0.5 grams on his fourth. Since his fever and subjective symptoms showed no response, he received no further chloroquine. He became afebrile gradually during the next six days; the only complication was a small amount of bleeding from one nostril.

Case 3

A twenty-year-old single student entered Stillman Infirmary on September 26, 1960, with the chief complaint of one to two weeks of intermittent headache. He had also noted some vague abdominal discomfort, periods of lack of energy, and excessive sleepiness. The throat had been sore for several days. His physical examination included a red, edematous throat with dirty gray exudate on the tonsils, 1.0 cm. lymph nodes in the neck, axilla, and groin, and 0.5 cm. epitrochlear nodes, enlarged splenic dullness by percussion, and a fever of 100° F.

His blood smear showed 84 per cent lymphocytes with abundant atypical lymphocytes, but two heterophile agglutinations were negative. Penicillin had been started before entry, but the throat culture showed no pathogens and the appearance and feeling of the throat did not respond.

He received 0.5 grams of chloroquine phosphate on the second infirmary day and 0.25 grams daily thereafter. His fever gradually subsided (we cannot rule out a response to chloroquine), but the sore throat persisted and was subsiding only at discharge on the fifth infirmary day.

Case 4

A twenty-two-year-old single student entered Stillman Infirmary on May 23, 1960, with the chief complaint of a few days of sore throat. Malaise and feverishness had also been present. His physical examination showed a fever of 99.5° F., small cervical, axil-

Table 1. Daily fever and chloroquine records (dosage of chloroquine given in grams)

Day	Case 1		Case 2		Case 3		Case 4		Case 5		Case 6	
	Max. temp.	Dose chlor.	Max. temp.	Dose chlor.	Max. temp.	Dose chlor.	Max. temp.	Dose chlor.	Max. temp.	Dose chlor.	Max. temp.	Dose chlor.
1	100.0		100.8		100.0		99.5		101.0		102.0	
2	101.8	2.0	101.4	2.0	100.6	0.5	100.0	1.0	101.2		103.0	
3	99.0	1.0	100.4	2.0	99.5	0.25	100.6	0.5	102.2		102.0	
4	100.5	0.5	100.8	0.5	98.6	0.25	98.8	0.5	101.2	1.0	101.4	
5	99.6		100.2		98.6	0.25	99.2	0.5	101.0	0.5	102.2	
6	98.0		99.9				100.0	0.5	102.2	0.5*	102.0	
7			98.6				99.5	0.5	99.2	*	101.2	2.0
8			100.5				99.0	0.5	98.6	*	100.5	1.0
9			99.0				98.6		99.2	*	100.8	1.0
10			98.6				98.6		99.0		100.8	1.0
11			98.6				98.6		97.6		100.2	0.5*
12							98.7				99.0	*
13							98.6				99.5	*
14											100.4	*
15											99.5	*

* Indicates Prednisone given on this day.

lary, and inguinal lymph nodes, a red throat, and a palpable spleen. Eyelid puffiness was present on the third infirmary day.

His laboratory examinations included a maximum lymphocytosis of 93 per cent and a heterophile agglutination (unabsorbed) positive in dilution of 1:320. Throat culture grew out both beta hemolytic streptococcus and *Staphylococcus aureus*, but the sore throat and fever did not respond to penicillin.

On the second infirmary day he received two doses of 0.5 grams chloroquine phosphate, and for the following six days he received 0.5 grams daily. Only a slow and irregular decline of fever took place, and the sore throat became worse during this treatment.

Case 5

An eighteen-year-old single student entered Stillman Infirmary on November 13, 1960, with a chief complaint of two to three days of headache. Sore throat and fever as high as 100.6° F. had been present. On physical examination, he had a temperature of 101° F., pharyngeal reddening, and shotty cervical lymph nodes.

His maximum lymphocytosis was 98 per cent (on November 16), and his heterophile agglutination (unabsorbed) was positive in a dilution of 1:160.

On the fourth infirmary day, he had exudate in the left tonsil (from which we could not culture pathogens), the cervical nodes were more prominent, and the spleen was palpable; his maximum fever that day was 101.2° F. He then received two doses of 0.5 grams chloroquine phosphate, and on the two succeeding days he received 0.5 grams daily. At this time, he was worse. His fever was 102.2° F., his throat was extremely painful so that he could not swallow solids. The throat was red, edematous, and contained much exudate.

Therefore, we discontinued the chloroquine and administered prednisone on that and the following three days; his daily dosages were 50, 40, 30, and 15 mg. respectively. He improved rapidly, with the temperature not rising above 99.2° F. after the fourth infirmary day and with the throat returning to normal both objectively and subjectively.

Case 6

A nineteen-year-old single student entered Stillman Infirmary on November 22, 1960, with the chief complaint of six days of malaise. He had noted headache, lethargy, and fever as well; his throat had not been sore. On physical examination he had a temperature of 102° F., slightly red throat, large posterior cervical nodes, and a palpable spleen.

His maximum lymphocytosis was 82 per cent, and the heterophile agglutination (unabsorbed) was positive at a maximum dilution of 1:1280.

His course was long and febrile, but uncomplicated. He received 2.0 grams of chloroquine phosphate on the seventh hospital day and 1.0 grams daily for four days thereafter. His course remained unchanged, and in an attempt to speed his return to classes he then received prednisone for five days (the daily dosages were 40, 30, 15, 20, and 10 mg.). This suppressed his fever partially, but as the dose tapered off, the fever exacerbated. He returned to his home for further convalescence on the fifteenth hospital day; later he reported that his fever disappeared after another three days.

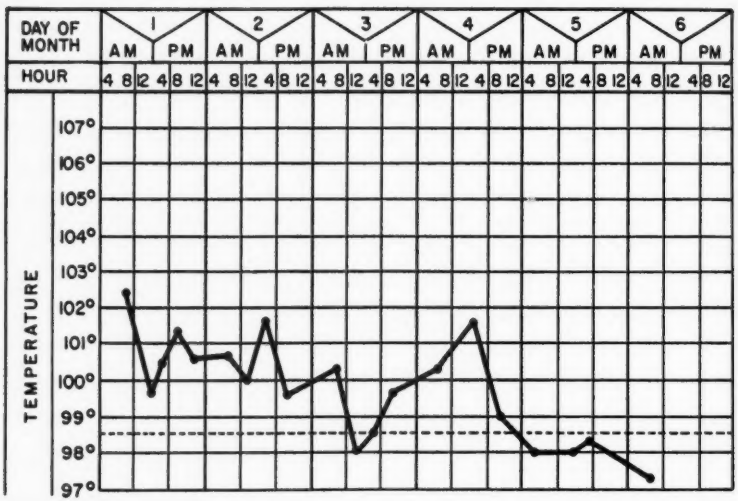
DISCUSSION

When we commenced treating patients with chloroquine phosphate, we anticipated a small pilot study to confirm Gothberg's results, to be followed by a double-blind study to evaluate the drug further. These negative results have not justified the further study, however. Since most practitioners do not have the opportunity to see patients with infectious mononucleosis as often as those in student health practice, it seemed to us important to make our findings available to the medical public.

Two explanations for the divergence of results appear possible. In the first place, infectious mononucleosis is a syndrome of unknown etiology. What we call a disease in fact may be two or more diseases. Therefore, Gothberg may have been treating a different disease than we, even though the clinical course and laboratory findings appear similar.

We feel it more likely, however, that Gothberg was observing examples of the occasional cases of infectious mononucleosis which improve rapidly rather than gradually, and that he happened to start chloroquine treatment at the onset of this spontaneous improvement. Chart 1 is the temperature chart of one of our patients who improved rapidly and spontaneously in this way.

Chart 1. Demonstrating rapid spontaneous defervescence in mononucleosis



An eighteen-year-old single student was admitted with two days of sore throat, chills and fever. His throat was red, and there was cervical adenopathy. His blood smear showed 60 per cent lymphocytes, with many atypical. Without treatment aside from bed rest, he had a spontaneous defervescence at the end of the fourth day.

SUMMARY CONCLUSION

We have presented the cases of six patients with infectious mononucleosis whose illnesses failed to show the rapid, dramatic response to chloroquine phosphate described by Gothberg.

Book Review

Textbook of Healthful Living. 6th ed. Harold S. Diehl, M.D., with the assistance of Stewart Craig Thomson, M.D. New York, Toronto, London: McGraw-Hill, 1960. 484 pages, illustrations.

The sixth edition of this book, which for the past twenty-five years has served both as a text and as a general reader for colleges, is one that should be enthusiastically received by those interested in adolescent health education.

Certain revisions are a marked improvement, especially those chapters dealing with mental health, sex life, stimulants, and narcotics. The author's method of presenting the facts regarding sexual behavior, smoking, and drinking, and then leaving the decision to the individual, is most refreshing. Too often books of this nature lecture and reprimand rather than educate. The relegating of responsibility to the individual conscience is carried out in all of the discussions and should be eminently acceptable to teenagers. This method's inevitable success should—and will be—noticed and incorporated by other health educators in the future.

The chapter on exercise, fatigue, and rest is an aptly presented survey of a neglected topic. It was particularly pleasing to find such a thoughtful discussion of posture.

The Glossary is complete, and can be most useful to the student reader who is searching for vocabulary and an understanding of the text. Robert J. Demarent's illustrations and colored plates depicting the various systems of the human body are exceptionally clear and applicable to lay comprehension.

There are three appendixes to this text. The first two, "Your Personal Health Record" and "Food Values in Common Portions," although well executed, seem superfluous. Such material can be found easily in other publications and only tends to clutter a volume of this sort. The third section, however, "Control of

Communicable Diseases in Man," is excellent both as a reference and for general reading.

It would be interesting to see how Dr. Diehl would handle the problems of health in space and the hazards related to atomic exposure and their prevention. Perhaps sometime in the future we may look for such an addition to his book.

The Constitution of the World Health Organization defines health as "a state of complete physical, mental, and social well being, and not merely the absence of disease or infirmity." This book is an admirable practical application of this principle.

MARSHALL LOUIS

Wells College

Abstracts of Current Literature

Binger, C. The Pressures on College Girls Today, *Atlantic Monthly*, *207:* 40–44, Feb. 1960.

Dr. Binger, presently serving as psychiatric consultant to the Harvard University Health Services, discusses the pressures on the present generation of college girls, including the preoccupation with eventual marriage, the sustaining of intellectual purpose and endeavor, and uncertainties about sexual relationships. The composite picture of these young women—their struggles, the emotional problems they present, their many assets—are clinically very familiar.

Binger stresses the frequently observed emotional reaction to depression. Though occasionally severe and even entailing a real risk of suicide, this reaction more commonly involves apathy and fatigue, lowered self-esteem and an inability to get work done. Guilt and anxiety are both present. This phenomenon, sufficiently common to be called "normal," is sometimes referred to as an identity crisis or adolescent turmoil.

Emphasis is placed on the college's appreciation of its students' essential nature and the recognition of institutional and group forces which may either hinder or encourage deep and meaningful intellectual learning which accompanies growing self-acceptance and a sense of identity. Though emotional problems are common in college girls, Binger notes the unusually favorable prognosis both in the prevention and treatment of these disturbances. He also points to the great value of relationships with more mature and older persons, not only in the faculty but in the student body. This article forms part of a new volume, *Emotional Problems of the Student*, edited by Graham B. Blaine, Jr., and Charles C. McArthur.

University of Pennsylvania JOHN E. REINHOLD

Duvoisin, R. C., and W. M. Vinson. Tuberous Sclerosis (Report of Three Cases without Mental Defect), *J.A.M.A., 175:* 869–73, March 11, 1961.

Tuberous Sclerosis (Bourneville's disease) is traditionally manifested by mental deficiency, epilepsy, adenoma sebaceum and visceral tumors. The first of these symptoms would render victims of this disease quite unlikely to appear in a University Health Service; hence, the disease would not be suspected in the population that we serve. However, the authors of this interesting article report three patients recently encountered in the Military Service who did not manifest any mental deficiency upon clinical or psychological examination. The presenting complaints included facial adenoma sebaceum, syncopal attacks and hypertension apparently related to a renal hamartoma typical of tuberous sclerosis. Procedures that led to the diagnosis included cutaneous biopsy, x-ray examination of the skull revealing cerebral calcifications, pneumoencephalographic examinations (reported normal in one and abnormal in two patients).

In summary, this article reminds us of a heretofore usually unsuspected condition that may well be related to symptoms encountered in Student Health Service dermatological, neurological and psychiatric practice. The increased use of skull x-ray examination may lead to increased frequency of detection of this supposedly rare disease.

JOHN H. WILMS

Purdue University

Heist, P., T. R. McConnell, F. Matsler, and P. Williams. Personality and Scholarship, *Science, 133:* 362–367, Feb. 10, 1961.

The traits of able students at colleges productive of scholars were compared to the traits of able students in other colleges. On the premise, supported by other recent studies, that the explanation for differential productivity lies more with the students than with the institutions they attend (without dismissing the importance of the interaction between them), two groups of National Merit Scholarship students were selected on the basis of attendance at

educational institutions ranked high or low in the production of future scholars and scientists. Four hypotheses were explored and, in general, firmly supported by the data. It was concluded that "students of high ability attending highly productive institutions have a pattern of traits, values, and attitudes which is more closely related to serious intellectual pursuits than have students of high ability attending less productive institutions."

JOHN E. REINHOLD

University of Pennsylvania

Hilleboe, H. E. Live Your Life—All of It, *J. Med. Educ.*, *11:* 1039–1045, Nov. 1960.

In this address to a graduating class of medical students the speaker calls to the attention of the graduates that they will soon come to a fork in the road; one road leading to "Learningville," the other to "Stagnationtown." He warns of changing social values; more Americans are well informed and able to distinguish between good and poor medical practice and will judge the new doctor less by the fact that he is a physician and more by the brand of medicine he practices. The author then prescribes a balance between preventive and clinical medicine and a co-operative approach rather than the individualistic approach of the country doctor of yesteryear. He urges his listeners to live life fully, to have imagination, faith and creativity, and to love their profession. He closes with a definition of love and these words, "Love is something you *live* with someone else. Make medicine that; make it something you live with all kinds of people—with patients who are sullen, hostile, profane, grateful, cheerful, despairing, indomitable; with colleagues who are stubborn, petulant, adamant, understanding, domineering, dedicated. Live your life—all of it—with the geniuses and the fools of the human adventure you will encounter. Then, when you have finished your task and some friendly philosopher asks you what you mean by 'loving medicine' you can proudly say to him, 'It's something I went through with a lot of human beings.' "

NORMAN S. MOORE

Cornell University

Lawson, J. D. The Scratch Sign—a Valuable Aid in the Diagnosis of Pneumothorax, *New Engl. J. Med., 264:* 88, Jan. 12, 1961.

The diagnosis of pneumothorax by means of the classic signs of this condition usually results in a rather high percentage of incorrect or missed diagnoses. In his search for a consistently reliable sign the author discovered one not previously described and which he has found to be present in all of twelve consecutive cases. He designates it the "scratch sign." It is elicited in this way: a Bowles stethoscope is placed at some midline position on the chest, either over the spine or sternum; at equidistant points from the stethoscope between 7.6 to 20 cm. from the stethoscope, the skin is scratched with a finger or blunt object. The sounds from similar areas on the two sides are compared. A positive sign consists of a considerably louder and harsher sound on the side of the pneumothorax. Minimal pneumothorax with slight apical retraction may be detected if the stethoscope is placed over the upper end of the sternum and the supraclavicular area on each side is scratched and the sounds compared.

RALPH W. ALEXANDER

Cornell University

Muench, George A. An Evaluation of Student Mental Health Services, *Amer. J. Orthopsychiat., 30:* 608–617, July 1960.

Dr. Muench considers five different areas "wherein current research trends in the evaluation of mental health (treatment) services seem most evident":

1. Assessing treatableness of clients.

2. Assessing the cultural influences upon psychotherapy. Muench places less emphasis on this factor than have some others in the field recently. He notes, too, that the college mental health clinic clientele are a much more homogeneous culture group than the patient group of community clinics.

3. Assessing the length of case in psychotherapy. He cites studies concerning the length of psychotherapy which deal with the so-called "failure-zone" in therapy ("therapeutic progress seems to be curtailed between the twelfth and twenty-first interviews"). He discusses some clinical implications of this.

4. Assessing the personality of the therapist.

5. Assessing the relationship between therapist and client.

"The current trend (in the study of the effectiveness of treatment services) is one which emphasizes the personality factors of client and therapist in dynamic interaction."

The article is valuable from the administrative, therapeutic, and research standpoints. An extensive bibliography is attached.

JOHN E. REINHOLD

University of Pennsylvania

Pirila, V., and A. V. Rantanen. Root Canal Treatment with Bacitracin-Neomycin as Cause of Flare-up of Allergic Eczema, *Oral Surg., 13:* 589–593, May 1960.

In recent years neomycin and bacitracin in combination has become the most common medication in treatment of infected root canals. A case of allergic reaction to this combination is reported. A generalized allergic reaction with a flare-up of allergic eczema began within one and one-half hours after the dental procedure in which a root canal was filled with a paste of bacitracin and neomycin. History was then obtained that the patient several years previously had become sensitive to neomycin and bacitracin in an ointment used in the treatment of eczema. Two weeks previous to the present episode he had used throat lozenges containing bacitracin, tyrothricin and benzocaine and had experienced a flare-up of eczema. After recovery from the reaction neomycin was given orally to the patient and within twenty-four hours he developed eczema in the previously involved areas. Methods of prevention and treatment of such reactions are discussed.

RALPH W. ALEXANDER

Cornell University

Roth, D., and Sidney J. Blatt. Psychopathology of Adolescence (Spatiotemporal Parameters), *A.M.A. Arch. Gen. Psychiat., 4:* 289–298, March 1961.

This article, although written with phraseology and terminology that I frequently find rather obscure, deals with aspects of be-

havior frequently seen among University students. I am sure that we have all been impressed by the remarkably precipitous and intense relationships that develop between boys and girls upon our campuses. Similarly, we frequently encounter dramatic evidence of extreme aggression, often without apparent cause, arising within these relationships to the painful surprise of the victim. The authors draw upon Anna Freud, E. H. Erikson, Schilder, and others, as well as upon projective psychological test results to relate this behavior to some psychoanalytic theories that I find quite plausible.

The relative immaturity of these ostensible heterosexual relationships is usually all too obvious. Although the authors speak of delayed, prolonged or belated adolescence of these patients, they might better refer to pregenital psychological factors. The extreme "heterosexual" attachments and often violent disruptions of these relationships are related to the efforts of the individual to establish fusion with and then differentiation from the parent of the opposite sex. Comfort must be established in and with the parent image before the ties can be broken, enabling attachment to another heterosexual object. The assault upon the beloved object reflects both the anxiety of fear of surrender, as well as the desperate need to establish differentiation between the self and the partner, achieving thereby some degree of advancing maturity and self-identity. The impatience and impulsivity that we observe is related by the authors to the distorted time perception of the grossly immature personality that has not progressed beyond the use of spatial concepts.

The writers, writing of severely disturbed patients, view the prognosis as poor. However, in our practice we encounter disability of lesser severity; hence more optimism is appropriate. Their concepts are no less relevant, however, and we may well use their therapeutic recommendations. They encourage goal-directed behavior, anticipation of reward (encouragement of time perception) and avoidance of unnecessary restraint or hospitalization.

This review cannot do justice to the material presented by Roth and Blatt. The reading and digestion of this article is highly recommended.

JOHN H. WILMS

Purdue University

Walters, P. A. Some Effects of Stealing in a College Dormitory, *Ment. Hyg., 44:* 582–591, Oct. 1960.

Psychiatric observations in a dormitory setting where girls were at odds with administration about ways of dealing with stealing reveal many interesting facets of the problem from a psychodynamic point of view. The paper shows the patience which may be required to unravel the causes for hostile group feelings and the tendency to make a scapegoat out of someone to solve the administrative problem, which in the instance described developed because the responsible group, the "house council," was too immature to handle. The author describes his work with the dormitory house council and indicates that one of the more valuable contributions a psychiatrist practicing in the college community can make is to furnish help, when indicated, to student government groups whose goals have become obscured.

NORMAN S. MOORE

Cornell University

Letter to the Editor

To the Editor:

The subject of "what constitutes a good College Health Service" is being written about and talked about considerably these days, so I hasten to proclaim that in my opinion we have a good health service at Oregon State University in Corvallis. You be the judge. You should know to begin with that I am brand new at this business, having been appointed Student Health Service Director at Oregon State College as of September, 1960! Thus, while my opinions are apt to be neophytic and you can have fun attacking them, no one can deny they are unfettered with past experience.

Our philosophy regards the student in general to be half adolescent and half adult. As a consequence we provide an "in loco parentis" health service which encourages the student to seek advice regardless of how minor the complaint may seem. There are nearly 8,000 students, of whom nearly 90 per cent seek service. Statistically each student makes four to five visits to the Student Health Service each year, and slightly over 1,000 received an average of two and one-half days of bed care. Since our campus is situated in a fairly small community (20,000) eighty-five miles from Portland and since the vast majority of our students are many miles from home we believe the infirmary care, as distinguished from dispensary care, is vital. You can decide whether we should be classified with the big, medium, or small colleges, but an additional facet of our thinking is that each student health service should grow to meet the individual requirements of its student body. We have been growing for forty-four years.

The Oregon State College Student Health Service is truly a *student* health service. This brings up the question of limitations. We are limited by two basic considerations: the community and our budget.

Corvallis has thirty-four physicians in private practice, of whom nineteen are specialists. We enjoy very cordial relations with these doctors and call upon their services whenever necessary, explaining to the student that a fee for services will be involved. It is partly in deference to our community doctors that we remain exclusively a service for students. Faculty, employees and students' families constitute a significant portion of the private practices of these doctors.

Our income derives from student fees and amounted to $134,000 last year. The student fee this year is $21.00—an increase of $3.00 over last year. Our expenses for 1959–1960 were $139,000, broken down as follows: Salaries for three full time and three part time doctors, $38,000. Wages for an assistant director, ten nurses, two technicians, three clerks, three cooks, one domestic, and one janitor, $64,000. Materials and operating expenses, $37,000, of which $11,000 was spent for drugs.

What does the student get for his $21.00 fee? Except for a $1.00 charge for each polio and each flu vaccination there are no "extras." The student receives twenty-four hours a day service, seven days a week, during three terms of school from September 18 to June 10. He is entitled to fifteen days of bed care in our infirmary, unallocated. The dispensary is open from 8 to 12 A.M. and 1 to 5 P.M. daily except Saturday when it is open 8 to 12 A.M. Two-thousand and sixty-two immunizations were performed last year. This year we did 2,800 tuberculin tests; 3,271 x-ray patients were "exposed to" 4,391 films; 10,267 laboratory tests were performed; and, as mentioned above, students received approximately $11,000 worth of drugs. The preceding year we purchased $15,000 worth of drugs. I will leave it up to you to calculate what these things would cost if supplied through private channels.

The health picture is incomplete until the Student Health Insurance program is discussed. We have a voluntary plan sponsored by a student insurance committee and participated in by 43 per cent of the students at a basic cost to each student of $16.50. For additional premiums the wife and children can be insured also. The insurance is placed by a local broker and most claims are adjusted locally. This local handling of claims is well worth the brokerage fee, of about 5 per cent of the total premiums. The